Service Manual

CROWN

VIDEO-RECORDER

DVR-6158D

DVR-6154D,DVR-6358D,DVR-6354D, DVR4153D =LENCO VCR9901

SPECIFICATIONS

Format	: VHS standard
Playback System	: 2 rotary heads, helical scanning system Luminance: FM azimuth recording Color Signal: Converted subscarrier phase shift recording
Video Signal System	: PAL-type color signal
Audio Track	: 1 track
Tape width	: 12.65mm (1/2 inch)
Tape Speed	: SP only 23.39 mm/s
Maximum Play Back Time:	240 min with E-240 Video Cassette
FF/REW Time	: Less than 6 min±30 sec. (E-180)
Power Source	: 220V, 50Hz
Power Consumption	: 30 Watts
Input Level	: Video: VIDEO IN jack (RCA) 1.0Vp-p, 75Ω unbalanced Audio: AUDIO IN jack (RCA) −10dBs, 50KΩ unbalanced TV Tuner: VHF 2-12 (11 CH) UHF 21-69 (49 CH) CATV S1'S-20 (23 CH.)

Output Level	: Video: VIDEO OUT jack (RCA) or Euro Jack 1.0Vp-p, 75Ω unbalanced Audio: AUDIO OUT jack (RCA) or Euro Jack −5dBs, Less than 10KΩ unbalanced RF Modulated: channel 75Ω unbalanced
Video Horizontal Resolution	: More than 240 lines
Audio Frequency Response	: 100 Hz-8 KHz
Signal-to-Noise Ratio	: Video: better than 45 dB Audio: better than 40 dB
Operating Temperature	: 5°C-40°C (41°F-104°F)
Weight	: 7.2 kg
Dimensions	: 430mm(W)×95mm(H)×359mm(D)
Provided Accessories	: Remote control unit Antenna Cable (DIN)

Design and specifications are subject to change without notice.

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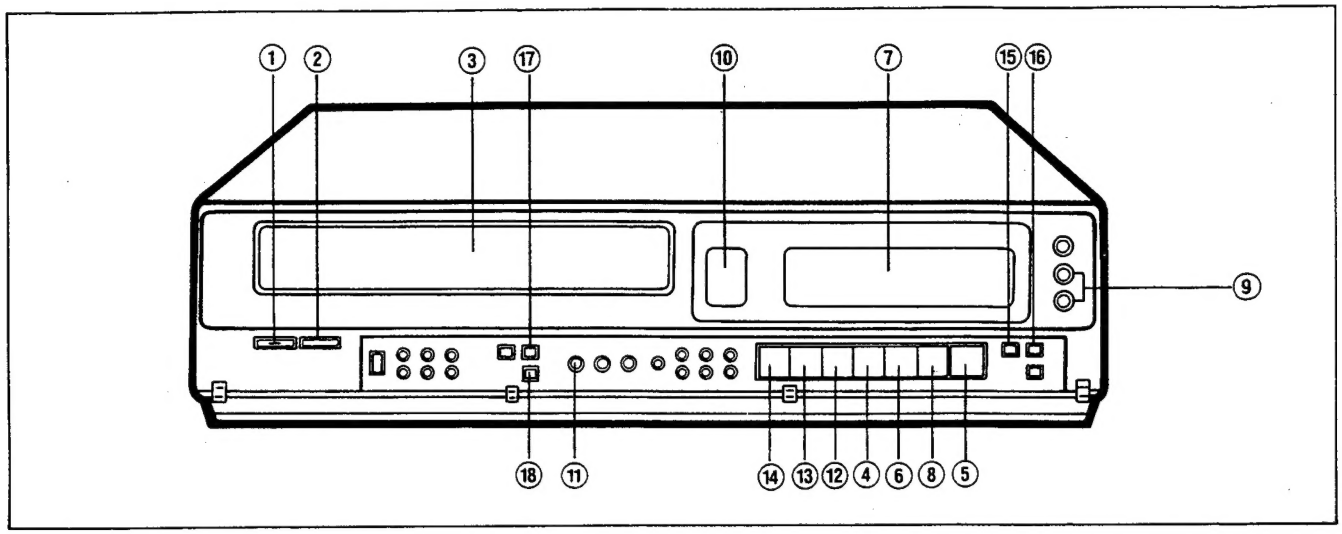
SECTION 1. GENERAL

1-1. IDENTIFICATION AND OPERATION OF CONTROLS (I) (DVR-6158D, 6154D)



① **POWER Switch**
Turns VCR power on and off.

② **EJECT Button**
Press to remove the cassette from the cassette compartment.

③ **Cassette Compartment**
When the cassette is inserted in this compartment, the cassette will automatically be ready for operation. The cassette indicator lamp (7) will light up.

④ **STOP Button**
Push to shop. All operating modes will be cancelled.

⑤ **RECORD Button**
Push this button to record. If the safety tab has been removed from the cassette, it will not be possible to record, thereby preventing your recordings from accidentally erased.

⑥ **PAUSE/STILL Button**
In the recording mode, you can stop the operation of the recorder temporarily in the playback mode, a picture will appear in the STILL mode. The STILL mode is released automatically after 5 minutes, and will return to the PLAY mode.

⑦ **Cassette Indicator Lamp**
When the cassette is correctly inserted in the recorder, this cassette indicator lamp will light up.

⑧ **Slow Button**
Push this button to slow the picture. When this button is pushed during playback, the picture will move slowly.

⑨ **Channel Selector Buttons**
Press to select the channels you wish to view or record.

⑩ **REMOTE Sensor**
Receives signals from the infrared remote control.

⑪ **TRACKING Knob**
Used when playing cassettes recorded on other machines using the VHS-system. Adjust this control to minimize black streaks across the TV picture during playback and slow mode. Set the control in its center position when recording and during subsequent playback and slow mode of cassettes on this VCR.

⑫ **FF Button**
The FF Button serves a dual purpose. Push to fast forward the tape. When this button is pushed during the playback mode, the picture will move quickly forward as three times of playback speed. In this mode, when this button is pushed again, the picture will move quickly forward as seven times of playback speed and you can search for the desired part of program. When play button is pushed, the recorder will return to the playback mode.

⑬ **PLAY Button**
Push to playback the recorded tape.

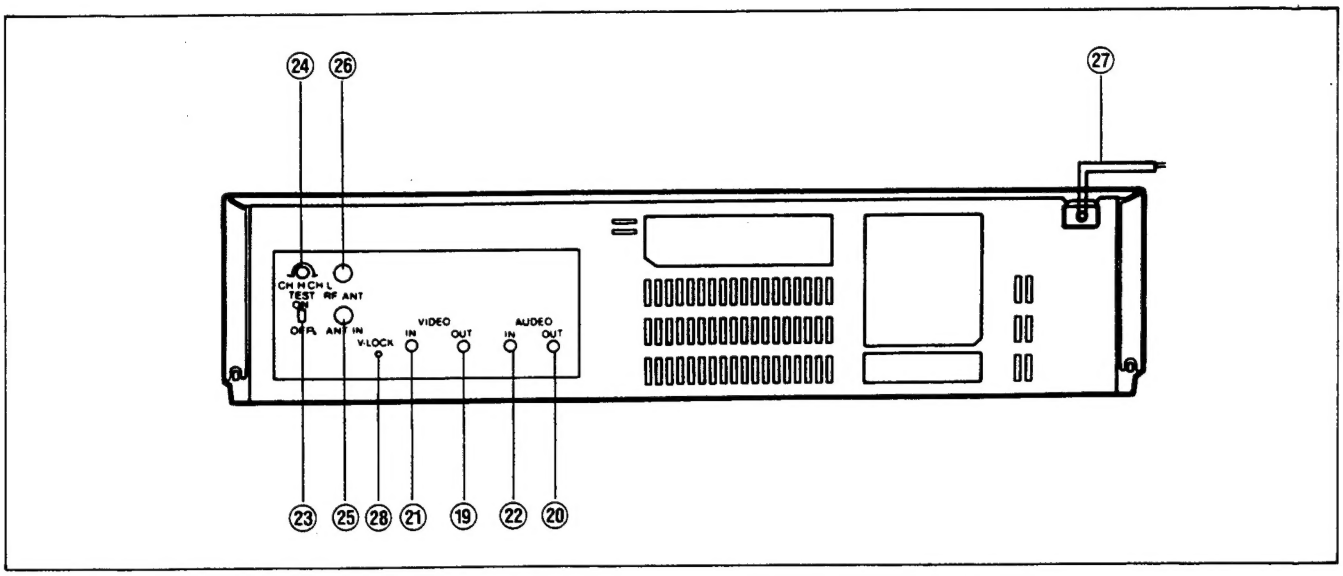
⑭ **REW Button**
The REW Button serves a dual purpose. Push to rewind the tape. When this button is pushed during the playback mode, the picture will move quickly backward as three times of playback speed. When this button is pushed again, the picture will move quickly backward as seven times of playback speed and you can seach for the desired part of program. When play button is pushed, the recorder will return to the playback mode.

⑮ **RESET Button**
Press to set the tape counter at the "0000" positon.

⑯ **MEMORY Button**
Press the memory "0000" of the counter. When the memory is set. "M" will light up at the head of the counter number, and your VCR will stop at "0000" during FF or REW operation.

⑰ **VPS Button**
(DVR-6158D only)

⑱ **OSD SET Button**



⑲ **VIDEO OUT Terminal**
Provides a video signal from the recorder to be used by other equipment.

⑳ **AUDIO OUT Terminal**
Provides an audio signal from the recorder to be used by other equipment.

㉑ **VIDEO IN Terminal**
Receives a video signal from other video equipment. Connecting a plug into this jack cuts off the picture from the tuner and records the video singal connected into the "VIDEO IN" jack.
Disconnecting the plug will automatically resume the pictue from the tuner.

㉒ **AUDIO IN Terminal**
Receives an audio signal from other equipment. Connecting a plug into this jack will cut off the audio signal coming from the VCR tuner and records the audio signal coming from the "AUDIO IN" Jack. Disconnecting the plug will resume the audio signal from the tuner.

㉓ **TEST SIGNAL SWITCH**

㉔ **RF Output Channel Adjustment Screw**

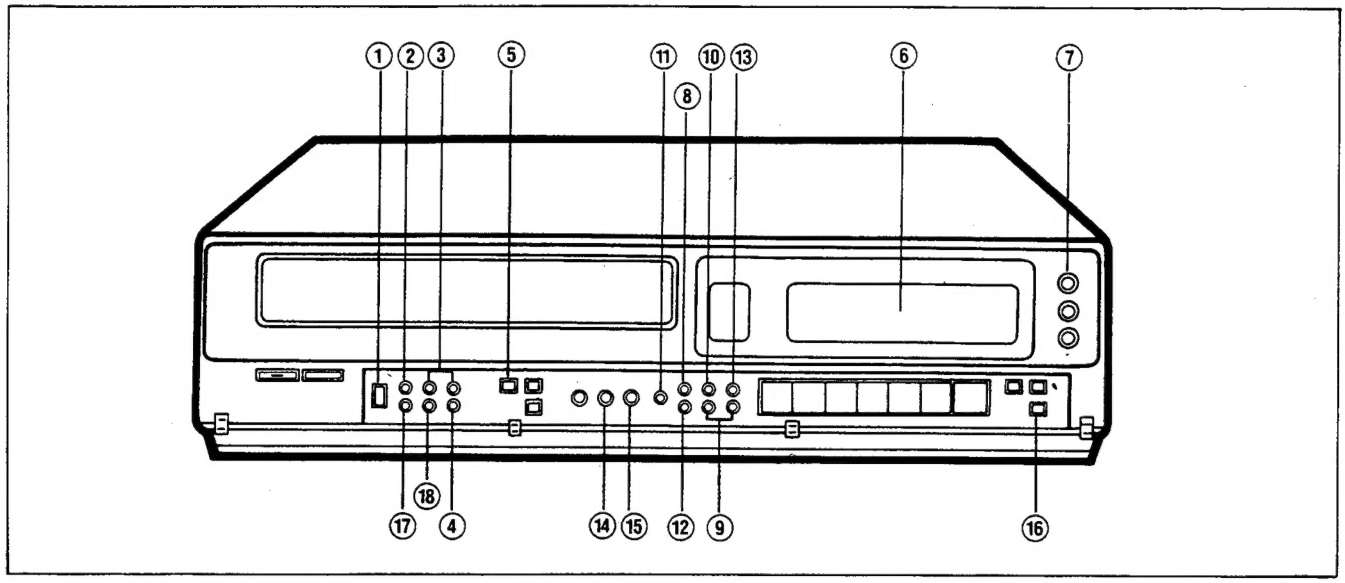
㉕ **VHF IN Terminal**
Connect VHF antenna to this terminal.

㉖ **RF OUT Terminal**
Connect to the aerial terminal of a TV receiver with the RF cable (provided).

㉗ **POWER CORD**
Connect this cord into the AC outlet (AC 220V).

㉘ **V. LOCK**
To adjust vertical sync. in STILL mode, adjust by using a small screwdriver.

IDENTIFICATION AND OPERATION OF CONTROLS (II): TIMER, CH PRESET PART



① **Mode selector switch**
- CLOCK SET: Put to set the present time.
- CLOCK : Current time is displayed.
- PGM SET : Put to program the timer.

② **ENTER Button**
Press to advance to the next item to be set during the CLOCK or PGM setting. Press this button to check each program when the mode selector switch is set to the clock mode.

③ **+/– Button**
Press this button to set the time, when the Mode Selector Switch is set to CLOCK SET or PGM SET. In the CLOCK Mode press this button for fine tuning in the CH. preset mode. (then, AFT indicator will be off).

④ **PGM CLEAR Button**
In the PGM SET Mode. Press to cancel the program input.

⑤ **Timer Button**
This button is used for unattended recording after programming functions have been completed. When this button is pressed. " " will appear on the Multi-Function Display.

⑥ **Multi-Function Display**

⑦ **OTR Button**
Press to input the recording time. Each touch to the button will advance the recording time by 30 minutes for up to 4 hours.

⑧ **Preset ON/OFF Button**
This button is used before tuning the channels.

⑨ **Search Up/Down Button**
Press to select the channels.

⑩ **CH. Memory Button**
Push to fix the channel memory after selecting the channels.

⑪ **CH. all Clear**
Press to clear the all channel memory.

⑫ **Search Auto**

⑬ **CH. Clear**
Press to clear the each channel memory.

⑭ **Slow Speed Knob**

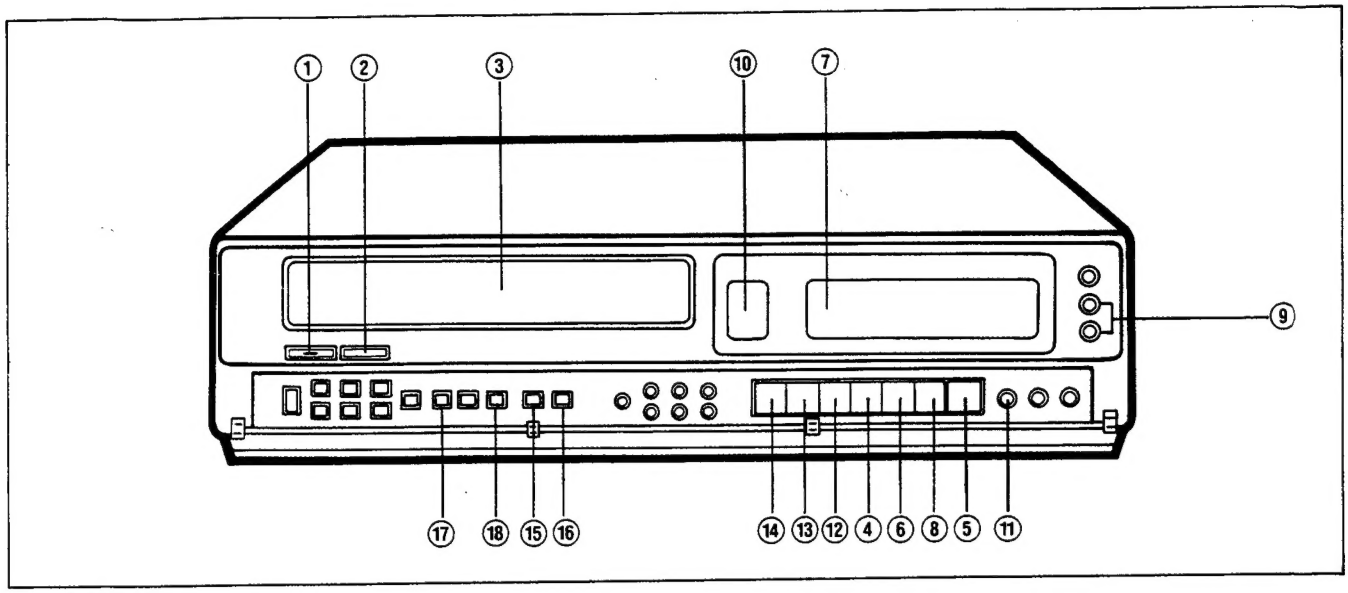
⑮ **PICTURE CONTROL Knob**
Adjust the sharpness of the picture in the playback mode.

⑯ **Display ON/OFF Button**
Press to select of multi-function display ON/OFF.

⑰ **INDEX Button**

⑱ **REPEAT Button**

1-2. IDENTIFICATION AND OPERATION OF CONTROLS (I) (DVR-6358D, 6354D)



① **POWER Switch**
Turns VCR power on and off.

② **EJECT Button**
Press to remove the cassette from the cassette compartment.

③ **Cassette Compartment**
When the cassette is inserted in this compartment, the cassette will automatically be ready for operation. The cassette indicator lamp (7) will light up.

④ **STOP Button**
Push to shop. All operating modes will be cancelled.

⑤ **RECORD Button**
Push this button to record. If the safety tab has been removed from the cassette, it will not be possible to record, thereby preventing your recordings from accidentally erased.

⑥ **PAUSE/STILL Button**
In the recording mode, you can stop the operation of the recorder temporarily in the playback mode, a picture will appear in the STILL mode. The STILL mode is released automatically after 5 minutes, and will return to the PLAY mode.

⑦ **Cassette Indicator Lamp**
When the cassette is correctly inserted in the recorder, this cassette indicator lamp will light up.

⑧ **Slow Button**
Push this button to slow the picture. When this button is pushed during playback, the picture will move slowly.

⑨ **Channel Selector Buttons**
Press to select the channels you wish to view or record.

⑩ **REMOTE Sensor**
Receives signals from the infrared remote control.

⑪ **TRACKING Knob**
Used when playing cassettes recorded on other machines using the VHS-system. Adjust this control to minimize black streaks across the TV picture during playback and slow mode. Set the control in its center position when recording and during subsequent playback and slow mode of cassettes on this VCR.

⑫ **FF Button**
The FF Button serves a dual purpose. Push to fast forward the tape. When this button is pushed during the playback mode, the picture will move quickly forward as three times of playback speed. In this mode, when this button is pushed again, the picture will move quickly forward as seven times of playback speed and you can search for the desired part of program. When play button is pushed, the recorder will return to the playback mode.

⑬ **PLAY Button**
Push to playback the recorded tape.

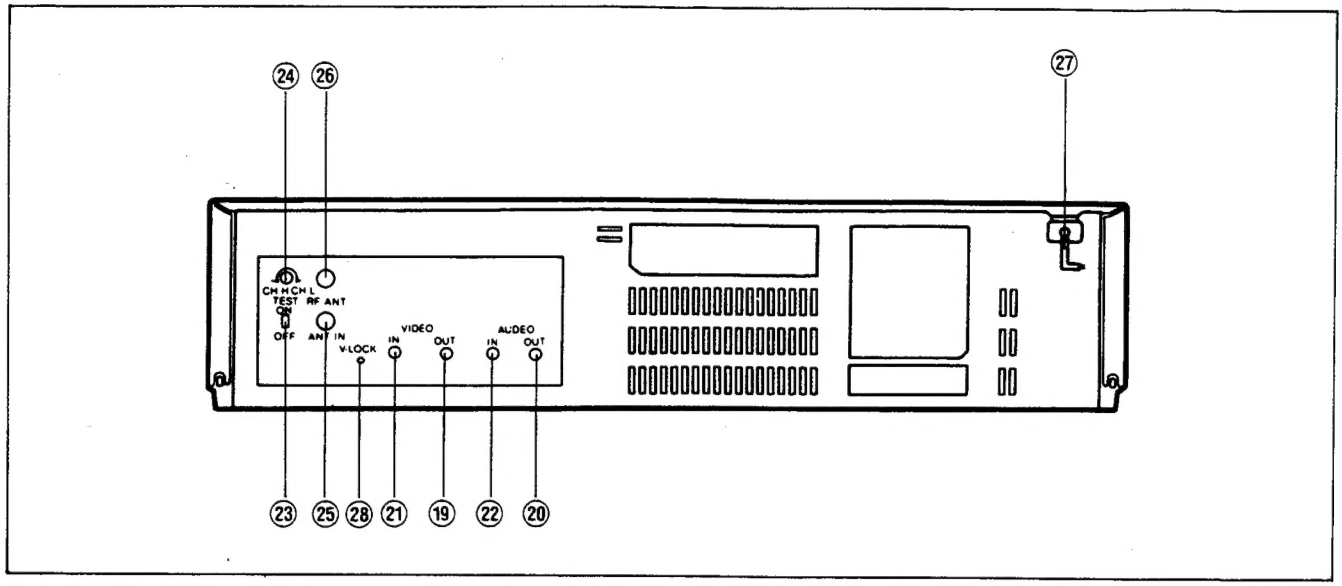
⑭ **REW Button**
The REW Button serves a dual purpose. Push to rewind the tape. When this button is pushed during the playback mode, the picture will move quickly backward as three times of playback speed. When this button is pushed again, the picture will move quickly backward as seven times of playback speed and you can search for the desired part of program. When play button is pushed, the recorder will return to the playback mode.

⑮ **RESET Button**
Press to set the tape counter at the "0000" position.

⑯ **MEMORY Button**
Press the memory "0000" of the counter. When the memory is set. "M" will light up at the head of the counter number, and your VCR will stop at "0000" during FF or REW operation.

⑰ **VPS Button**
(DVR-6358D only)

⑱ **OSD SET Button**



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Receives an audio signal from other equipment.
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㉓ **TEST SIGNAL SWITCH**

㉔ **RF Output Channel Adjustment Screw**

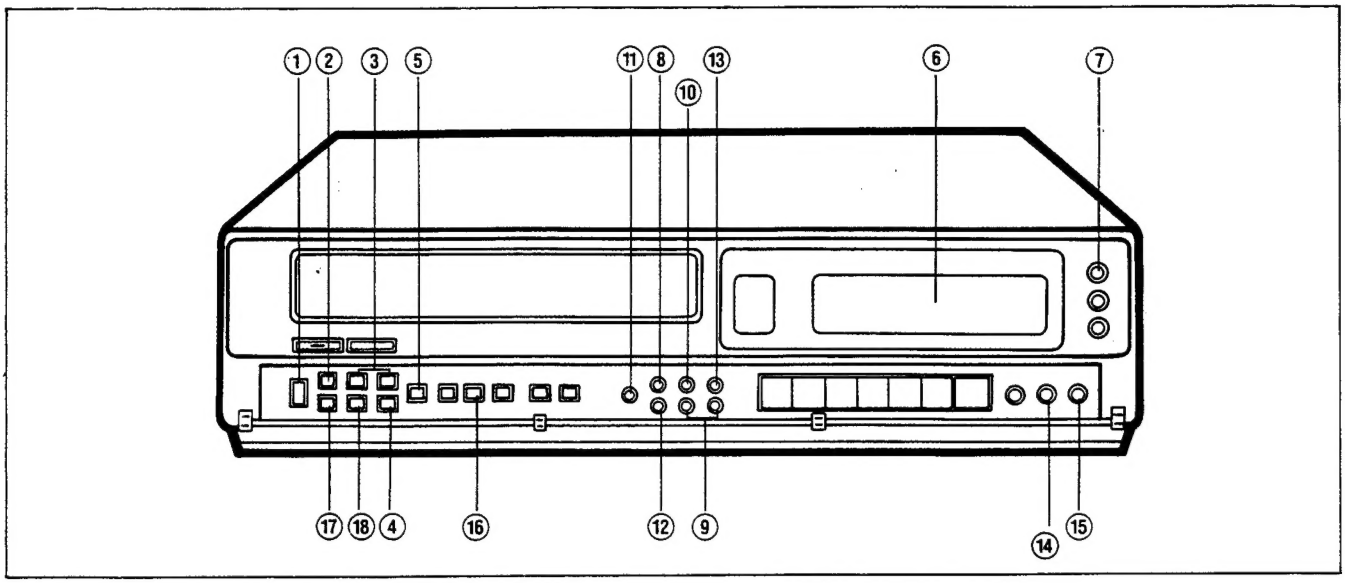
㉕ **VHF IN Terminal**
Connect VHF antenna to this terminal.

㉖ **RF OUT Terminal**
Connect to the aerial terminal of a TV receiver with the RF cable (provided).

㉗ **POWER CORD**
Connect this cord into the AC outlet (AC 220V).

㉘ **V. LOCK**
To adjust vertical sync. in STILL mode, adjust by using a small screwdriver.

IDENTIFICATION AND OPERATION OF CONTROLS (II): TIMER, CH PRESET PART



① **Mode selector switch**
- CLOCK SET: Put to set the present time.
- CLOCK : Current time is displayed.
- PGM SET : Put to program the timer.

② **ENTER Button**
Press to advance to the next item to be set during the CLOCK or PGM setting. Press this button to check each program when the mode selector switch is set to the clock mode.

③ **+/– Button**
Press this button to set the time, when the Mode Selector Switch is set to CLOCK SET or PGM SET. In the CLOCK Mode press this button for fine tuning in the CH. preset mode. (then, AFT indicator will be off).

④ **PGM CLEAR Button**
In the PGM SET Mode. Press to cancel the program input.

⑤ **Timer Button**
This button is used for unattended recording after programming functions have been completed. When this button is pressed. " " will appear on the Multi-Function Display.

⑥ **Multi-Function Display**

⑦ **OTR Button**
Press to input the recording time. Each touch to the button will advance the recording time by 30 minutes for up to 4 hours.

⑧ **Preset ON/OFF Button**
This button is used before tuning the channels.

⑨ **Search Up/Down Button**
Press to select the channels.

⑩ **CH. Memory Button**
Push to fix the channel memory after selecting the channels.

⑪ **CH. all Clear**
Press to clear the all channel memory.

⑫ **Search Auto**

⑬ **CH. Clear**
Press to clear the each channel memory.

⑭ **Slow Speed Knob.**

⑮ **PICTURE CONTROL Knob**
Adjust the sharpness of the picture in the playback mode.

⑯ **Display ON/OFF Button**
Press to select of multi-function display ON/OFF.

⑰ **INDEX Button**

⑱ **REPEAT Button**

SECTION 2. ELECTRICAL ADJUSTMENTS

2-1. ALIGNMENT AND ELECTRICAL ADJUSTMENT

For these adjustments, use the equipment mentioned below and proceed by using the alignment tape and video signal.

Instruments and Tools Required

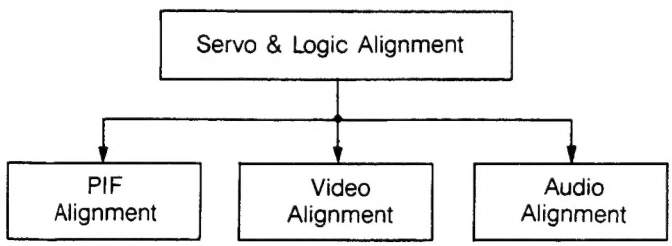
1. Color TV receiver.
2. Oscilloscope having 10 MHz or more bandwidth.
3. Color-bar generator.
4. Frequency counter.
5. VTVM.
6. VOM (20 kμ/V).
7. Audio oscillator.
8. Audio attenuator.

Signal Level and Input and Output Impedance Requirement

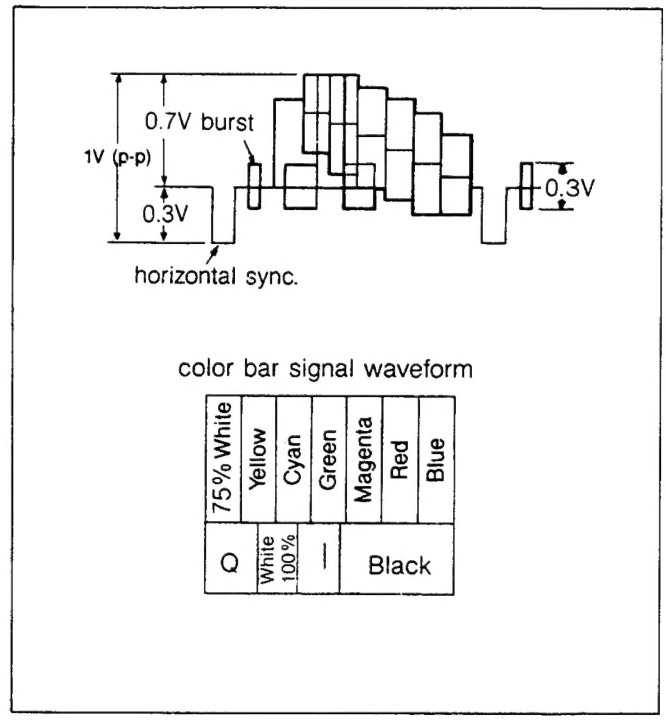
1. Video output: Negative sync, 1Vp-p standard composite video signal, 75Ω.
2. Video output: Same as above.
3. Audio input: Line −10dBm 50kΩ.
4. Audio output: −5dB, 10kΩ or less.

Adjustments Sequence

The VCR should be adjusted in the sequence shown below.



The suitable output waveform of the color-bar singal generator is shown below.

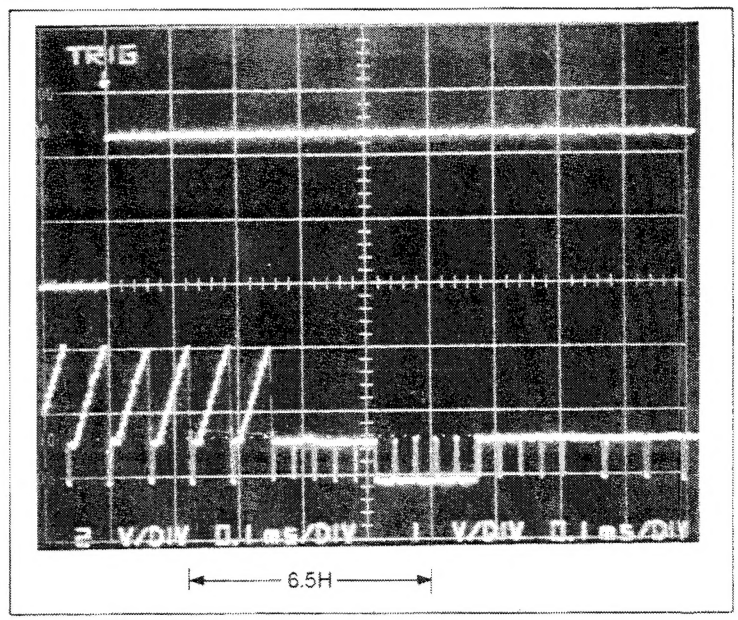


2-2. SERVO-LOGIC CIRCUIT ADJUSTMENT METHOD

1. VIDEO HEAD SWITCHING POSITION

Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
R594 TP593	TP396 PT01 ③	Oscilloscope	Play	DN-2 Monoscope or Stair Step

1) Play back the test tape.
2) Set the oscilloscope in the chop mode connect the CH1 to SW pulse (PT01 ③), the CH2 to TP396 (video out) with CH1 triggering.
3) Adjust R593 for the positive trigger until 6.5H±0.5H cycles before the vertical SYNC pulse.
4) Also, adjust R594 for the negative trigger until 6.5H±0.5H cycles before the vertical SYNC pulse.



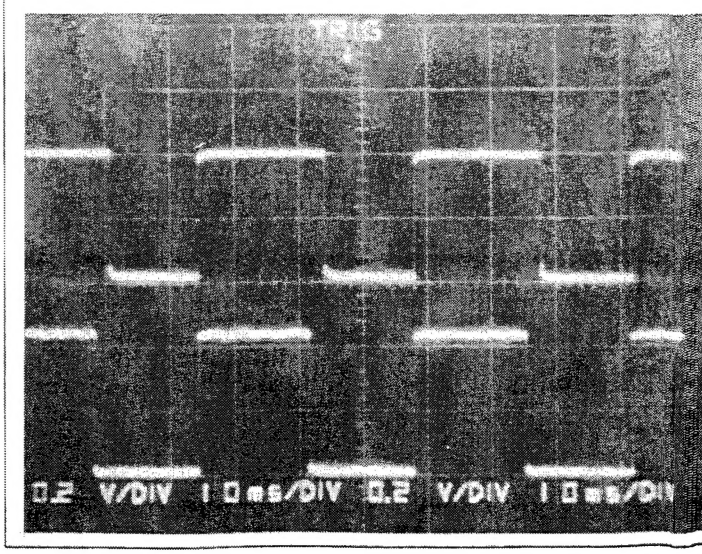
2. SUB-TRACKING ADJUSTMENT

Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
TP591	PT01 ③ PT01 ④	Oscilloscope	Play	DP-2 Monoscope or Stair Step

1) Set the tracking volume to the mechanical center where it clicks, play the test tape.
2) Set the oscilloscope in the chop mode connect the CH2 to the SW pulse (PT01 ③), the CH1 to the CTL pulse (PT01 ④) with CH1 triggering.
3) Adjust R591 until the phase difference between the rising EDGE of SW pulse and *the CTL pulse is equal as shown below.

*the CTL pulse is 1.7 msec
(6158D, 6154D, 6358D, 6354D)

Rising EDGE

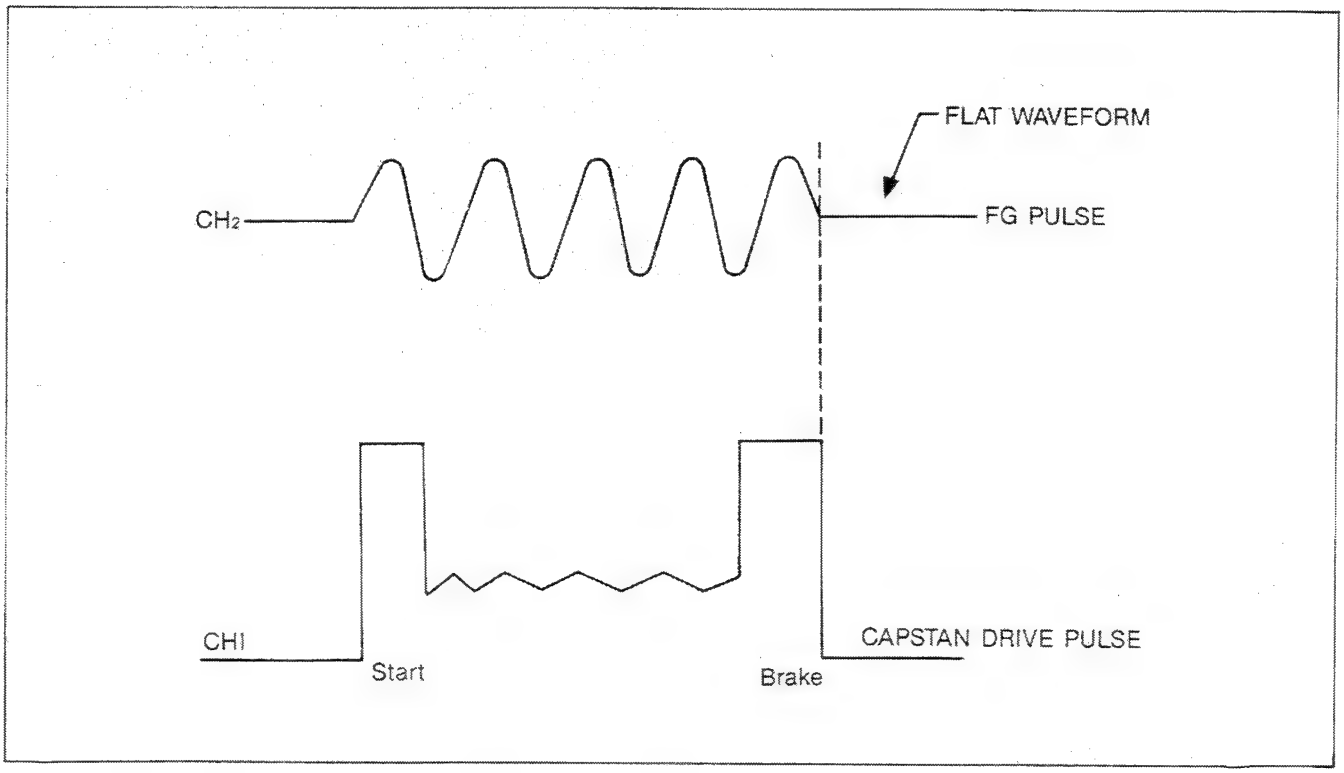


Horizontal: 5μs/div.
Vertical : 2 V/div.

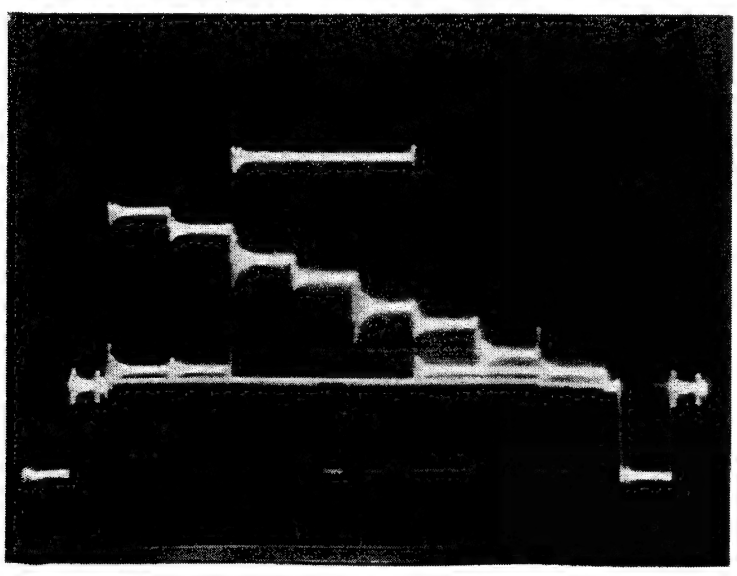
3. BRAKE ADJUSTMENT

Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
R595	TP502 TP501	Oscilloscope	Slow	DP-1 Color Bar

1) Connect the EXT. TRIGGER of the oscilloscope to TP502.
2) Connect CH1 to TP501 and CH2 to TP502.
3) Set the VCR to the slow mode.
4) Set the tracking volume to mechanical center.
5) Adjust R596 as shown blow.
6) Connect the VCR to the TV monitor.



1. E E VIDEO LEVEL

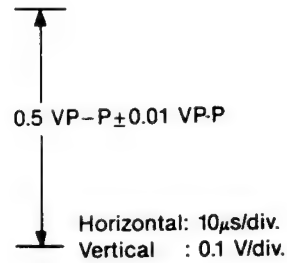


2-3. VIDEO CIRCUIT ADJUSTMENT METHOD

1. E E VIDEO LEVEL

Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
R395	TP395	Oscilloscope	EE	—

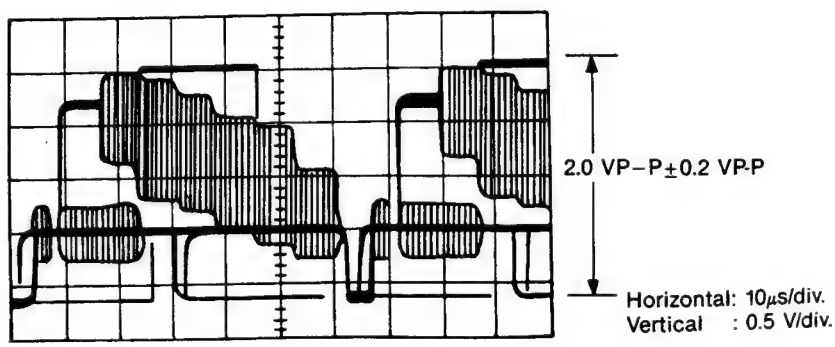
1) Feed the color bar signal to the line input terminal. And set for the stop (EE) mode.
2) Connect the oscilloscope to TP395 and trigger the scope with a composite SYNC signal at TP313 COMP. SYNC.)
3) Adjust the oscilloscope so that it can display a waveform of approx. 2H.
4) Adjust R395 to obtain 0.5±0.01 Vp-p between SYNC TIP and 100% white level.



2. PLAYBACK Y-SINGAL OUTPUT LEVEL

Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
R396	TP396	Oscilloscope	PB	DP-1 (Color Bar)

1) Playback the test tape (Color Bar Signal).
2) Connect the oscilloscope to TP396 and trigger the scope with a composite SYNC signal at TP313.
   Adjust the scope so that it can display a waveform of approx. 2H.
3) Adjust R396 to obtain 2.0 Vp-p±0.2 Vp-p between the SYNC TIP and 100% white level.



3. Y-COMB

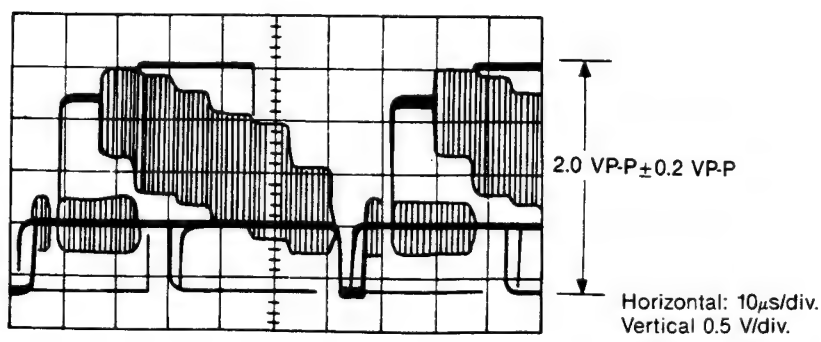
Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
R397	TP397 TJ397	Oscilloscope	PB	DP-1 (Color Bar)

1) Playback the test tape (Color Bar Signal).
2) Connect the oscilloscope to TP397 (CH1) and TJ397 (CH2). Set the oscilloscope to be "BOTH" mode and vertical range of CH1, CH2 to be equal.
3) Set the oscilloscope to the "ADD" mode after inverting the CH2.
4) Adjust R397 to minimize the output level.

6. FM DEVIATION

Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
R392	TP396	Oscilloscope	PB & REC	DP-1 (Color Bar) Blank Tape

1) Confirm that the adjustment for the playback Y-Signal output level has been made correctly.
2) Feed the color bar signal to the line terminal, and set the VTR to the record mode.
3) Connect the oscilloscope to TP396 and trigger the scope with a composite sync signal at TP313.
4) Record the color bar signal for a few minute and playback it. Then confirm that the playback Y-signal output level is 2.0 Vp-p±0.2 Vp-p.
5) If the playback Y signal output level is not 2.0 Vp-p±0.2 Vp-p, the adjust as follows.
   5-1) Set the VTR in the record mode.
   5-2) Turn the variable R392 a little.
   5-3) Record the color bar signal for a few minute and playback it.
   5-4) Confirm the playback Y signal output is 2.0 Vp-p±0.2 Vp-p.
   5-5) Repeat from step 5-1) until the playback Y-signal output level becomes 2.0 Vp-p±0.2 Vp-p between the sync. TIP.



4. SYNC TIP FREQUENCY

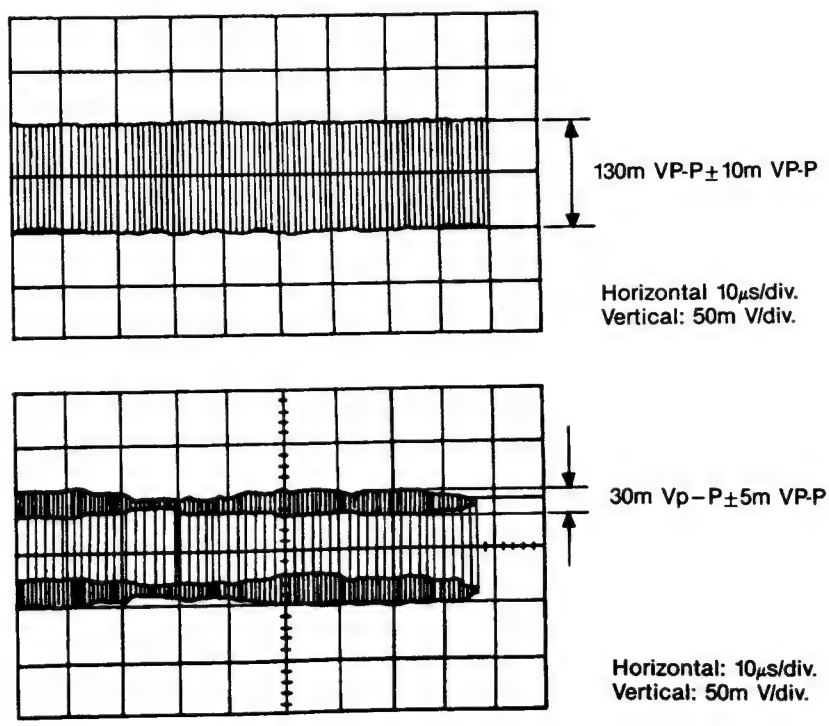
Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
R391	TP391	Freq. Counter	REC.	—

1) Set the unit to stop mode without video signal. (Phone jack of video line input is shorted with ground)
2) Connect the frequency ounter to TP391.
3) Adjust R391 until the sync. TIP frequency becomes 3.80 MHz±0.1 MHz.

5. LUMINANCE AND COLOR RECORD CURRENT

Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
R399 R491	TP399 TP400	Oscilloscope	REC.	Blank Tape

1) Set the unit to REC mode without video signal. (Phone jack of video line input is shorted with ground).
2) Connect the probe to TP399 and TP400 (GND).
3) Adjust R399 so that Y-FM record current level become 130mVp-p±10mV.
4) Trigger the scope with a composite sync signal at TP313.
5) Adjust R491 so that color record current level becomes 30mVp-p±5mV.



2-4. AUDIO CIRCUIT ADJUSTMENT METHOD

1. PLAYBACK OUTPUT LEVEL

Adj. Location	Measuring Point	Measuring Equipment	Condition of Adj.	Test Tape
R291	Audio Line Out (TP203)	Audio Level Meter	Paly Mode	1KHz, 0dBm

1) Connect the audio level meter to the audio line output jack.
2) Play back the test tape.
3) Adjust R291 until the audio level meter reads −5.0 dBm play back output.

2. PLAYBACK OUTPUT FREQUENCY CHARACTERISTIC

Adj. Location	Measuring Point	Measuring Equipment	Condition of Adj.	Test Tape
Checking	Audio Line Out	Audio Level Meter	Paly Mode	1KHz, 0dBm 6KHz, 0dBm

1) Playback the Test tape, and confirm that the playback output level at 6 KHz is within 0±3, 5 as referenced to the 1 KHz playback output level.

3. BIAS CURRENT ADJUSTMENT AND OSCILLATION FREQUENCY CHECKING

Adj. Location	Measuring Point	Measuring Equipment	Condition of Adj.	Test Tape
R292	TP201, TP202, TP204, (C218)	Frequency Counter VTVM	REC. Mode	Blank Tape

1) Connect the frequency counter to TP204.
2) Connect the positive lead of the VTVM to TP202 and negtive led to TP201.
3) Set the VCR in recording mode.
4) Confirm the frequency counter display is 70 KHz±10% and adjust R292 until VTVM reads 2.4 mVrms.

4. RECORD-PLAYBACK FREQUENCY RESPONSE

Adj. Location	Measuring Point	Measuring Equipment	Condition of Adj.	Test Tape
Checking	Audio Line Out	Audio Level Meter Audio Signal Generator	REC. Play Mode	Blank Tape

1) Connect the audio signal generator to the audio line input jack. And the audio level meter to the audio line output jack.
2) Record reference audio signal of the 400 Hz and 8KHz (SP), 400 Hz and 5 KHz (LP) audio signal at-25 dBm. (DVR-6158D, 6154D, 6358D, 6354D is SP only).
3) Check to insure that the 8 KHz playback output level is within −1±3 dB as reference to the 400 Hz playback output level.
4) Check to insure that the 6 KHz playback output level is within −1±3 dB as reference to the 400 Hz playback output level.
5) If the difference between 8 KHz playback output level and 400 Hz is more than +0 dB in crease the bais current more than 2.7 mVms, and if the difference is less than −6 dB reduce the bias current less than 2.1mVrms.

5. RECORD-PLAYBACK OUTPUT LEVEL

Adj. Location	Measuring Point	Measuring Equipment	Condition of Adj.	Test Tape
Checking	Audio Line Out	Audio Level Meter Audio Signal Generator	REC. Play Mode	Blank Tape

1) Connect the audio signal generator to the audio line input jack.
2) Record and playback the input of the audio reference signal 1 KHz, −10 dBm.
3) Confirm that play output level is −5±3 dBm as referenced to the playback output level.

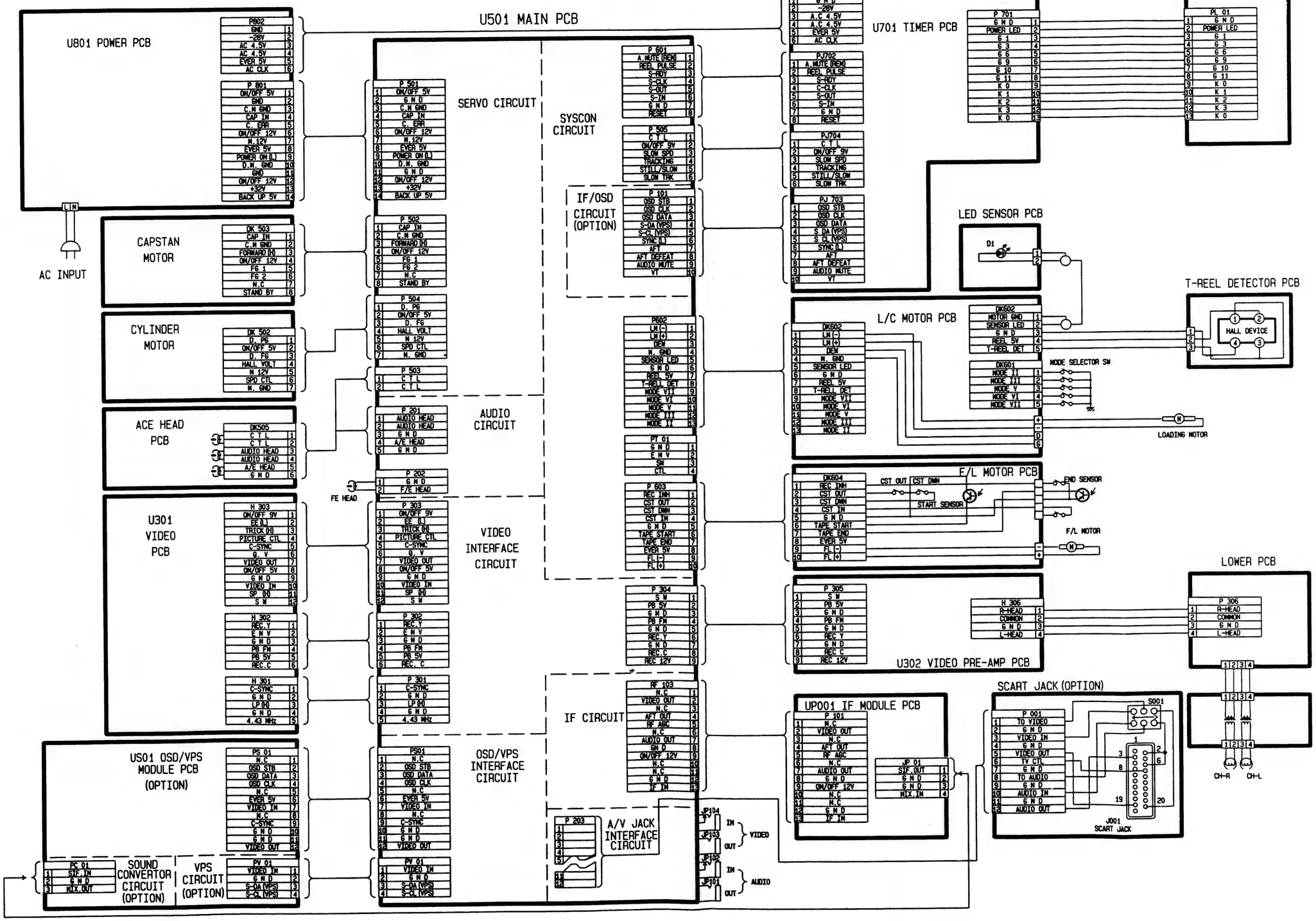
2-5. PIF CIRCUIT ADJUSTMENT METHOD

1. SYNC DETECT

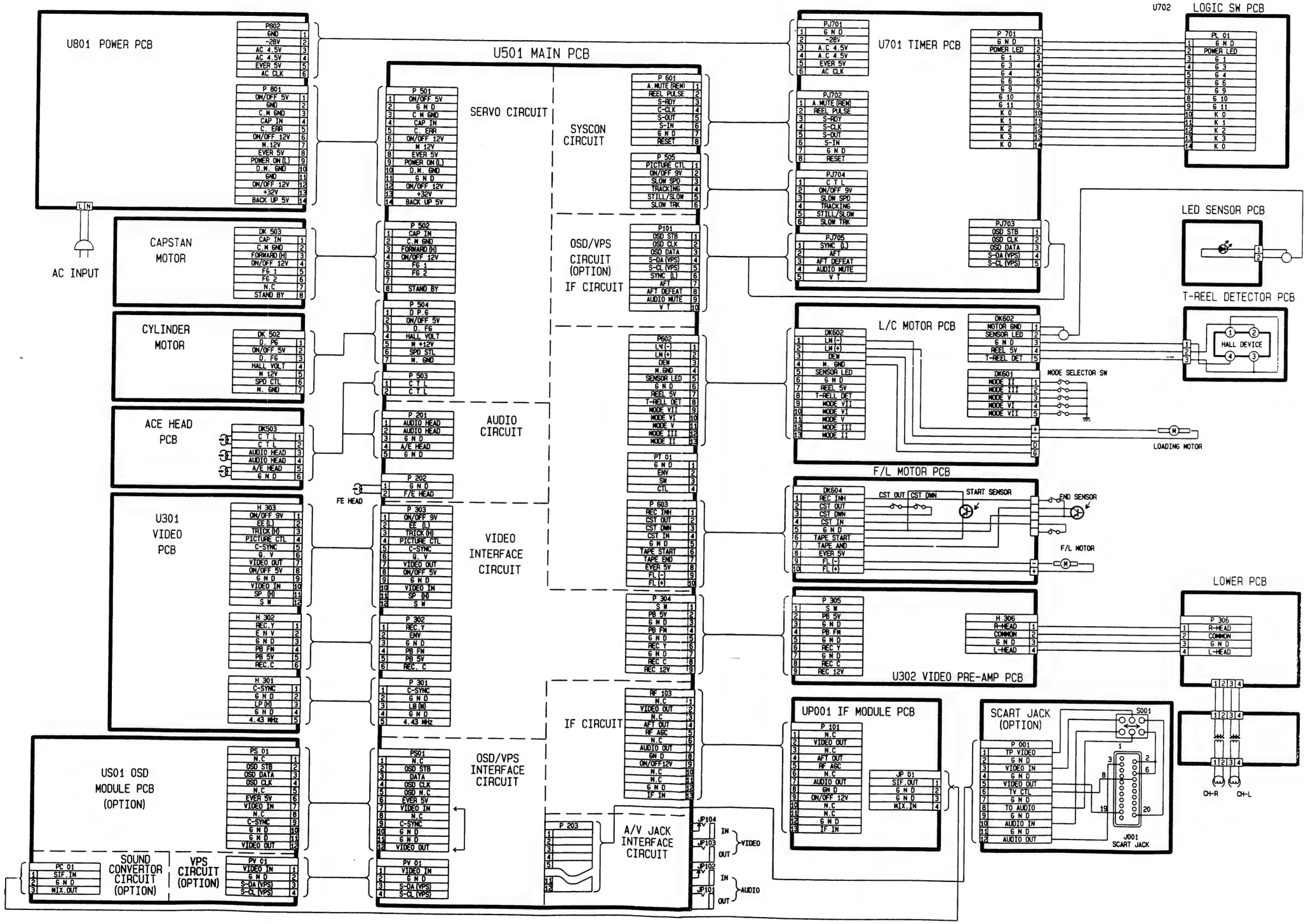
Adj. Location	Measuring Point	Measuring Equipment	Condition of Adj.	Test Tape
R193	IC102 ④	Frequency Counter	Stop	—

1) Disconnect the Video line input jack.
2) Connect the frequency counter to ④ pin of IC 102.
3) Adjust R193 until counter reads 15625±20Hz when TP191 is shorted with TP192.

1. CONNECTION SCHEMATIC DIAGRAM I (DVR-6158D, 6154D)



3-2. CONNECTION DIAGRAM II (DVR-6358D, 6354D)



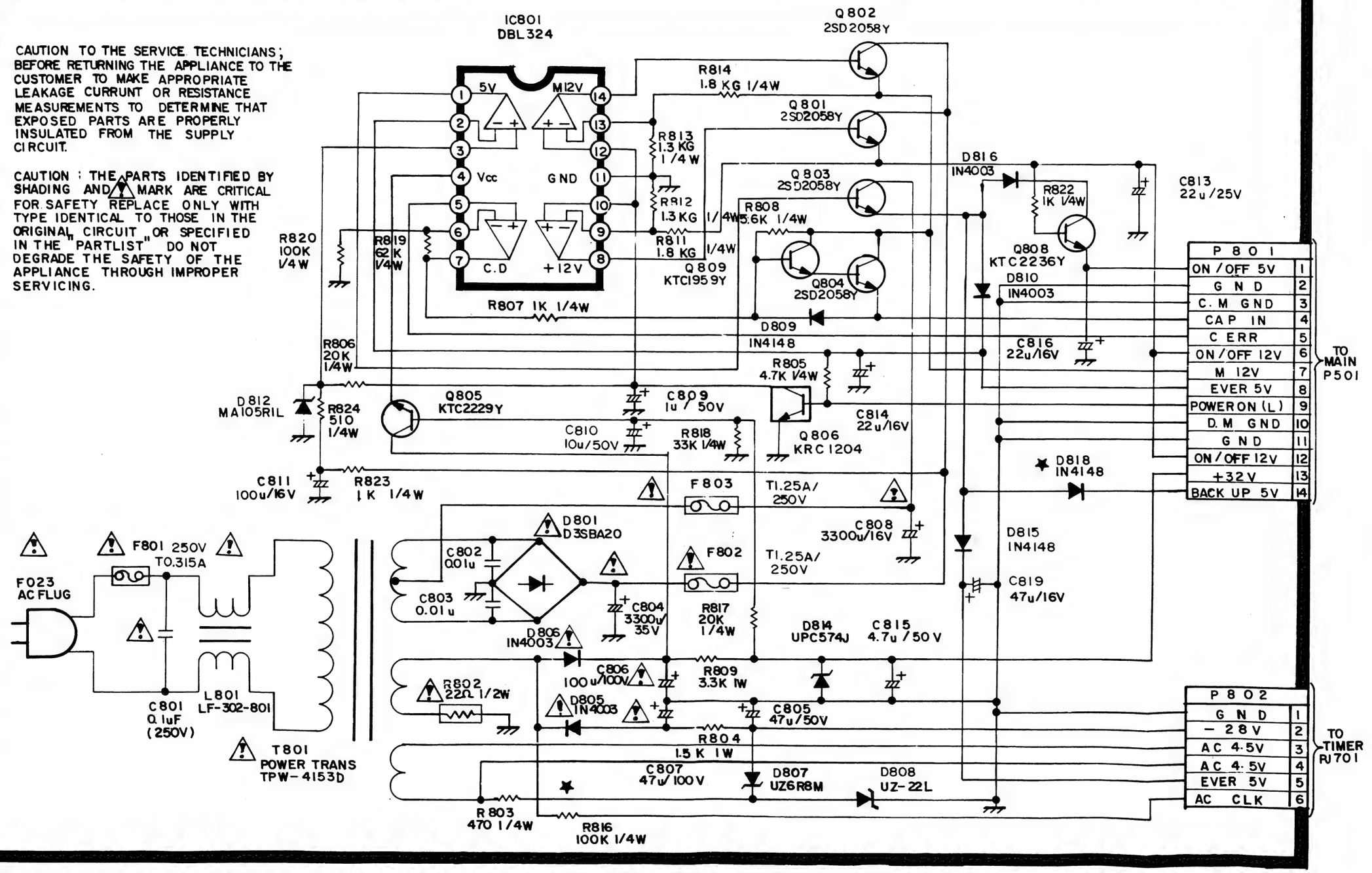
6358_CONN M1 SCHEM 11 Jan 1990

3-3. U801 POWER CIRCUIT (DVR-6158D, 6358D, 6154D, 6354D)

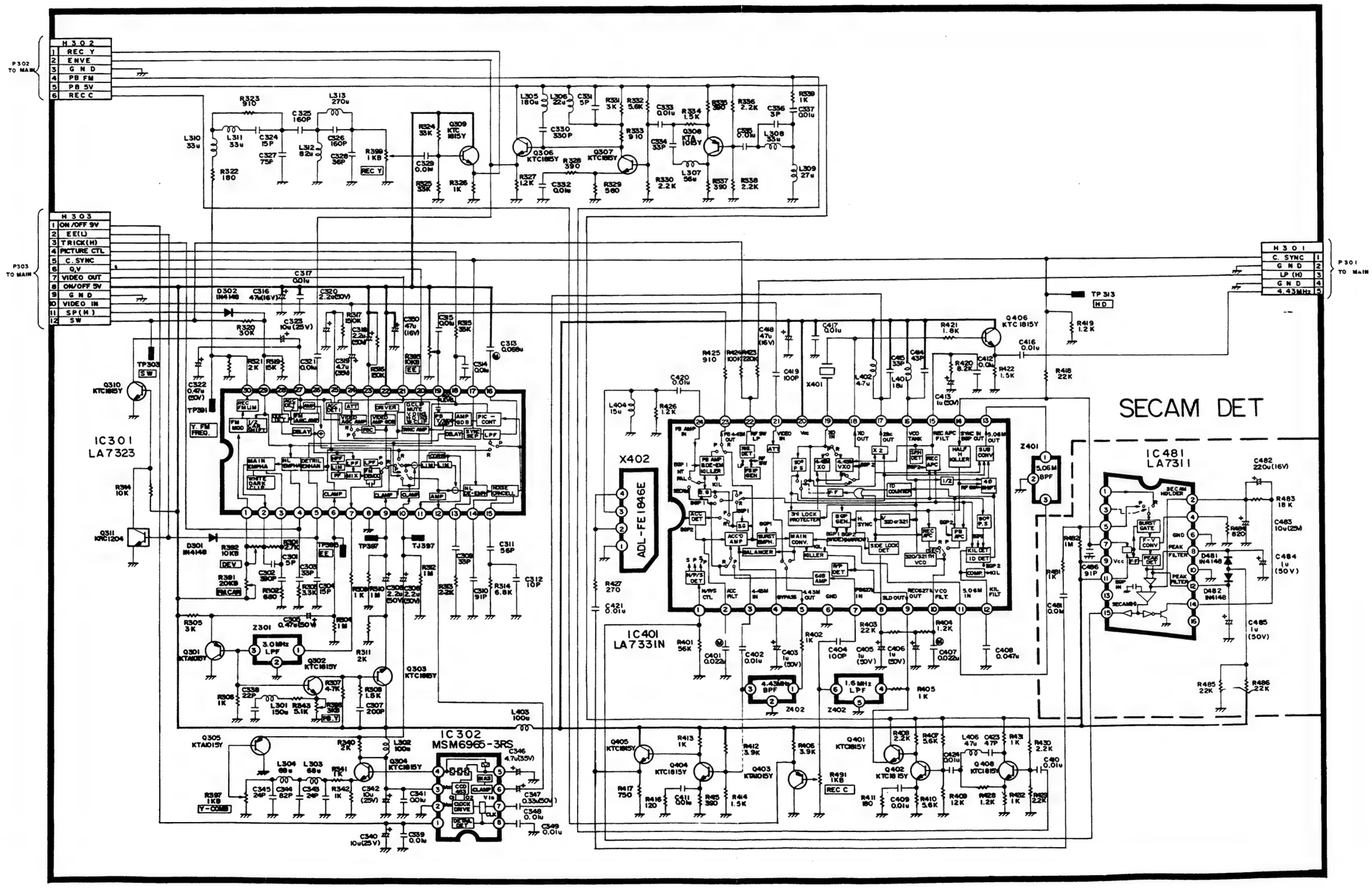
★ : OPTION

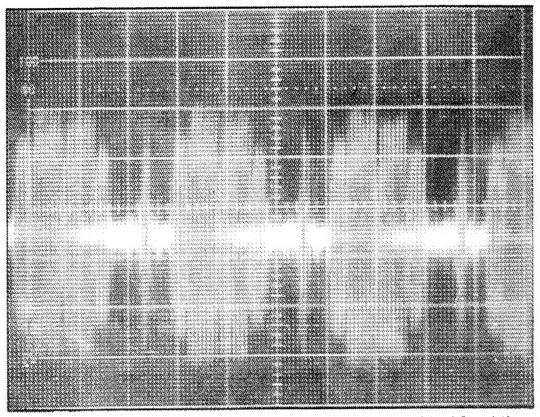
CAUTION TO THE SERVICE TECHNICIANS;
BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER TO MAKE APPROPRIATE LEAKAGE CURRUNT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE PROPERLY INSULATED FROM THE SUPPLY CIRCUIT.

CAUTION : THE ⚠ PARTS IDENTIFIED BY SHADING AND ⚠ MARK ARE CRITICAL FOR SAFETY REPLACE ONLY WITH TYPE IDENTICAL TO THOSE IN THE ORIGINAL "CIRCUIT" OR SPECIFIED IN THE "PARTLIST" DO NOT DEGRADE THE SAFETY OF THE APPLIANCE THROUGH IMPROPER SERVICING.

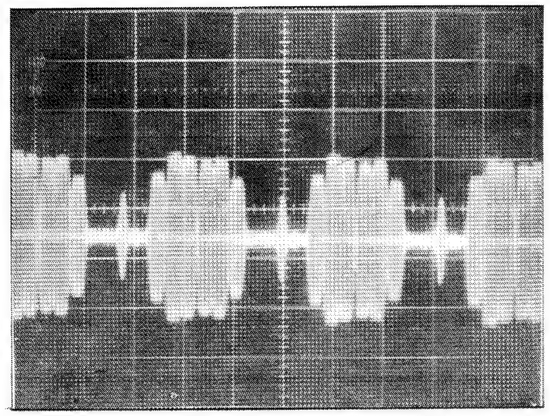


3-4. U301 VIDEO CIRCUIT DIAGRAM (DVR-6158D, 6358D, 6154D, 6354D)

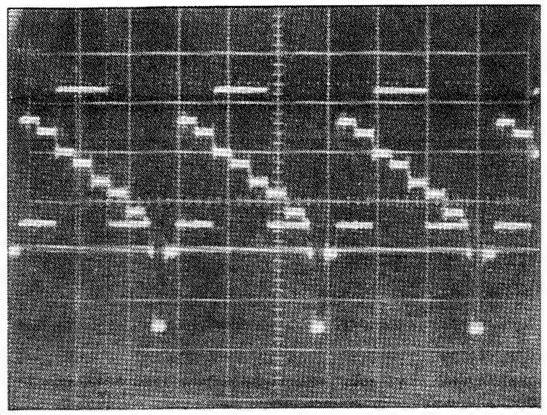




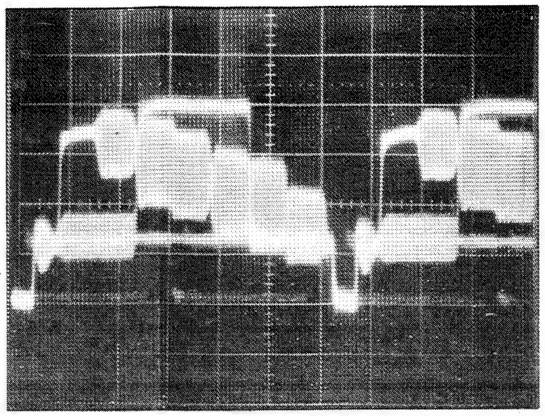
IC401 ⑦ (PLAY) H: 20μs/div
V: 0.05V/div



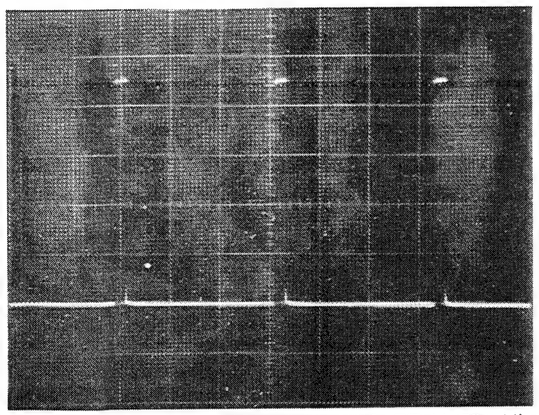
IC401 ㉓ (PLAY) H: 20μs/div
V: 0.1V/div



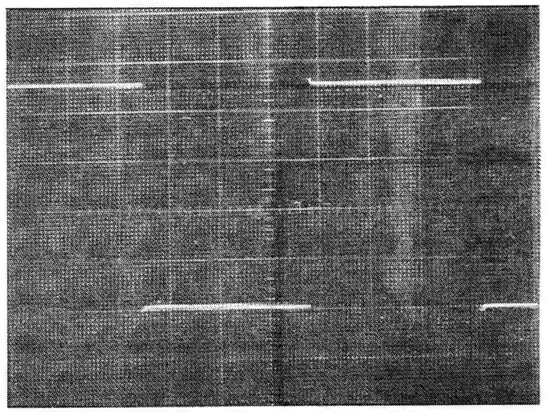
TP397 (PLAY) H: 20μs/div
V: 0.1V/div



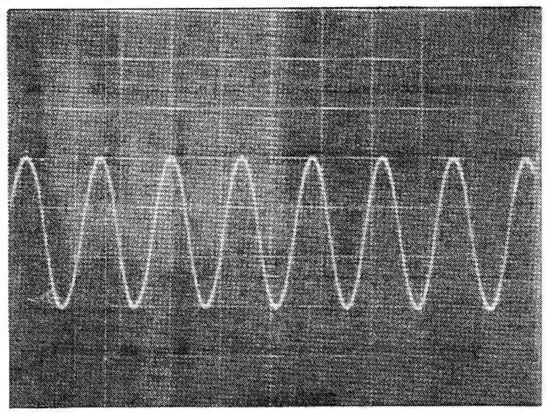
H303 ⑦ (PLAY) H: 10μs/div
V: 0.5V/div



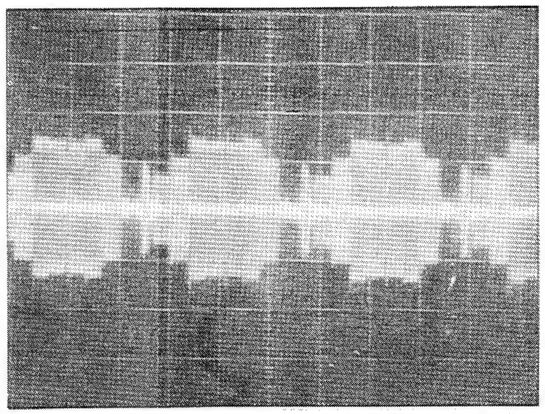
TP313 (PLAY, REC, EE) H: 20μs/div
V: 1V/div



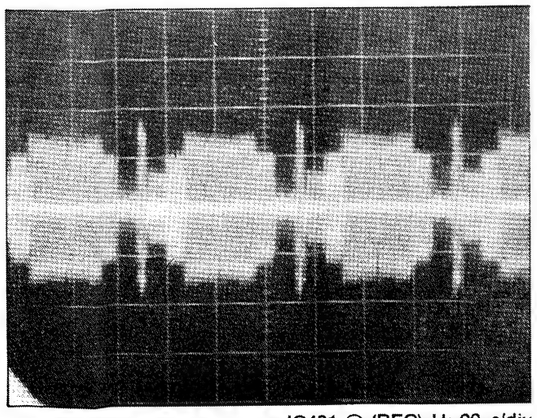
TP303 (PLAY, REC, EE) H: 5μs/div
V: 1V/div



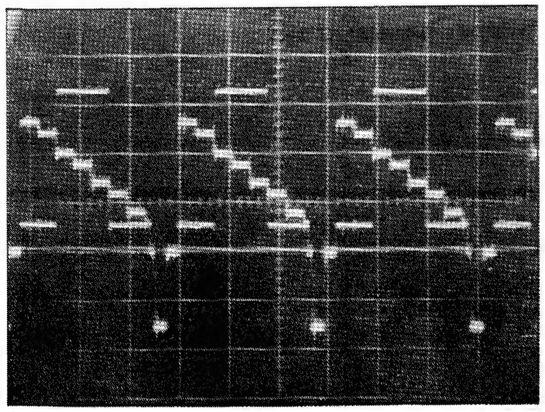
IC401 ⑰ (PLAY, REC, EE) H: 50μs/div
V: 0.1V/div



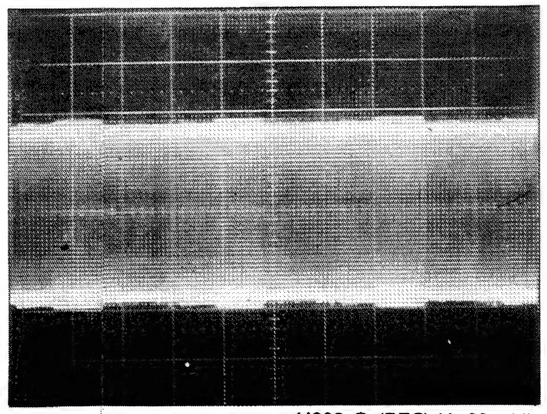
H302 ⑥ (REC) H: 20μs/div
V: 0.02V/div



IC401 ③ (REC) H: 20μs/div
V: 0.5V/div

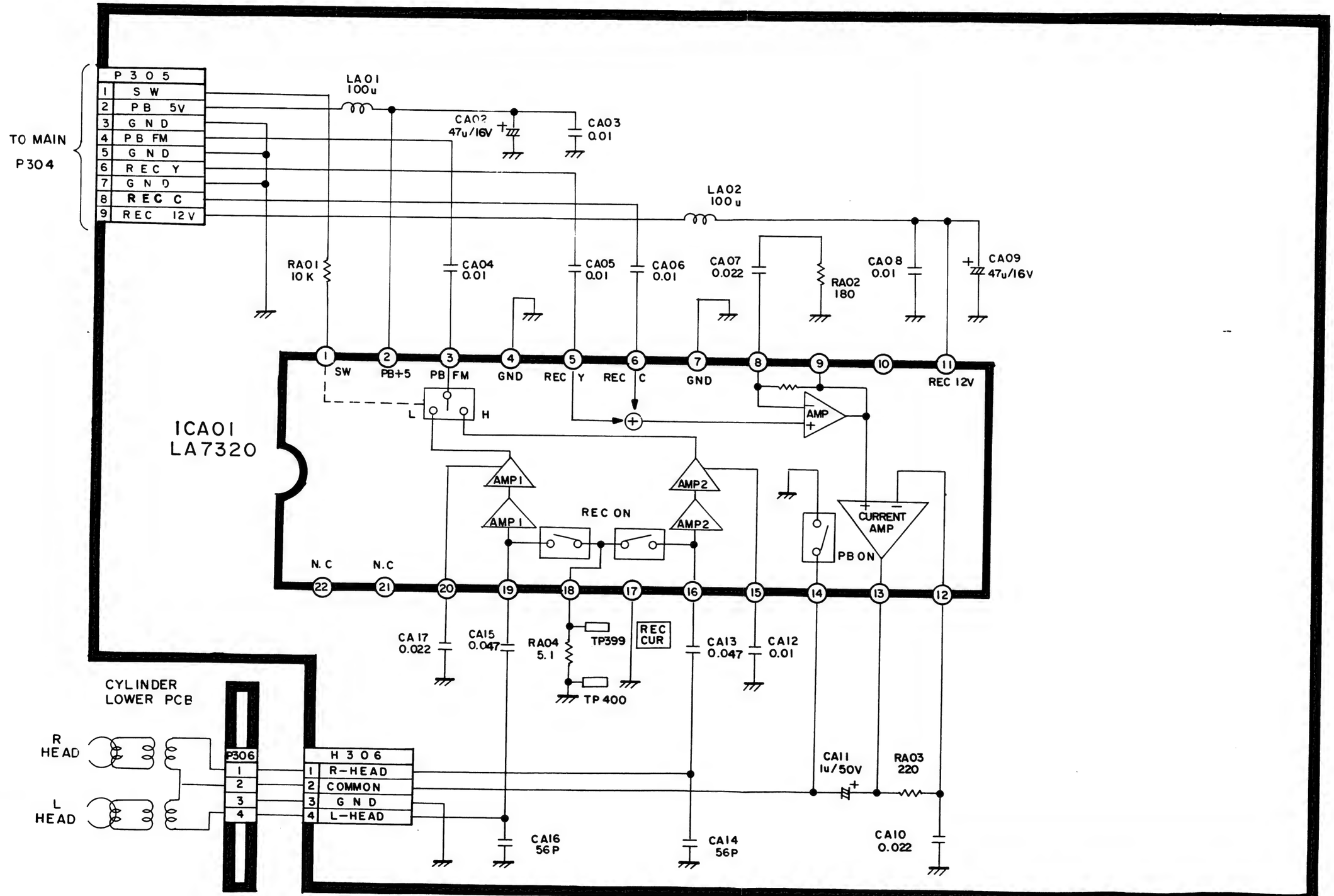


TP395 (REC) H: 20μs/div
V: 0.1V/div

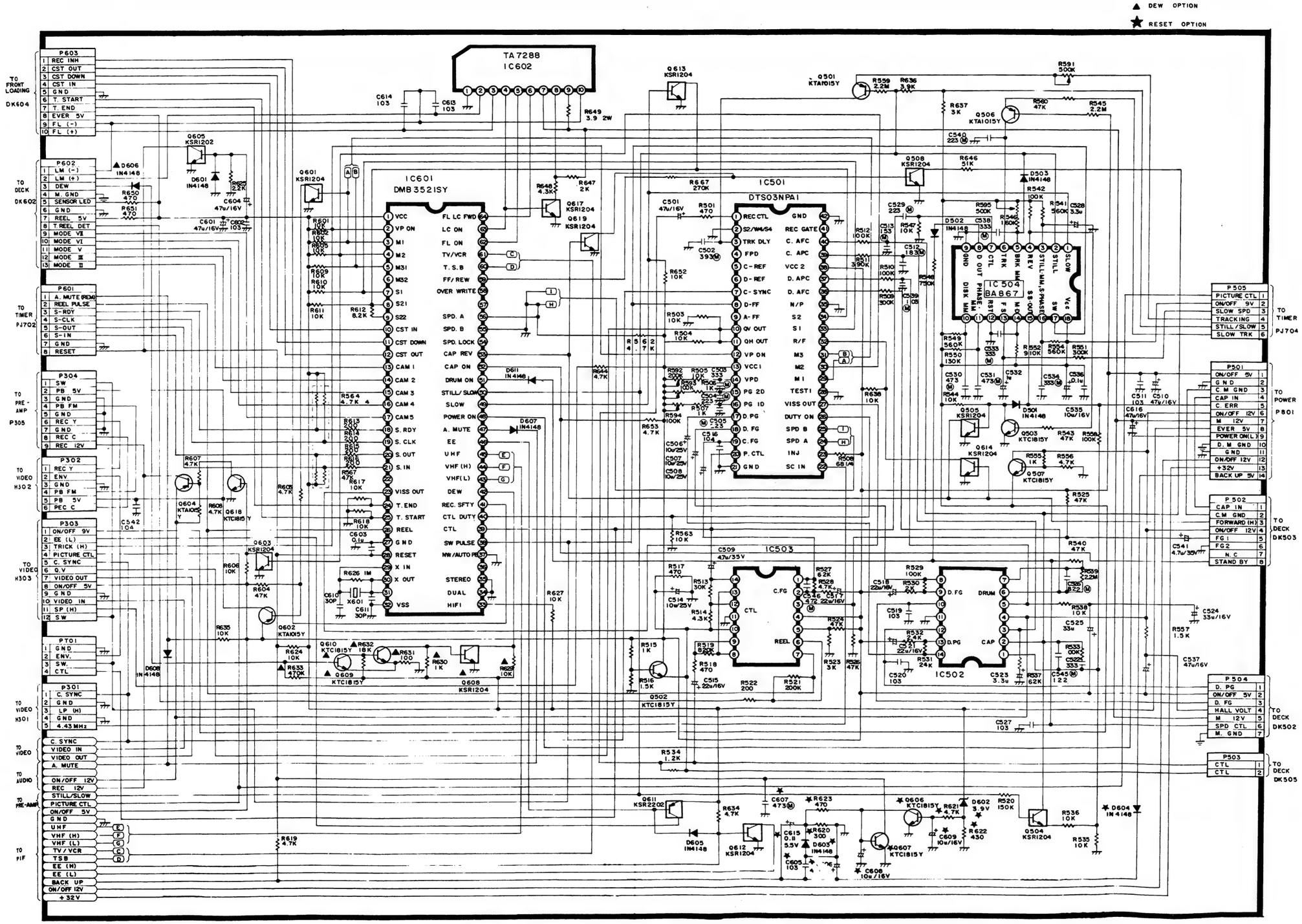


H302 ① (REC) H: 20μs/div
V: 0.1V/div

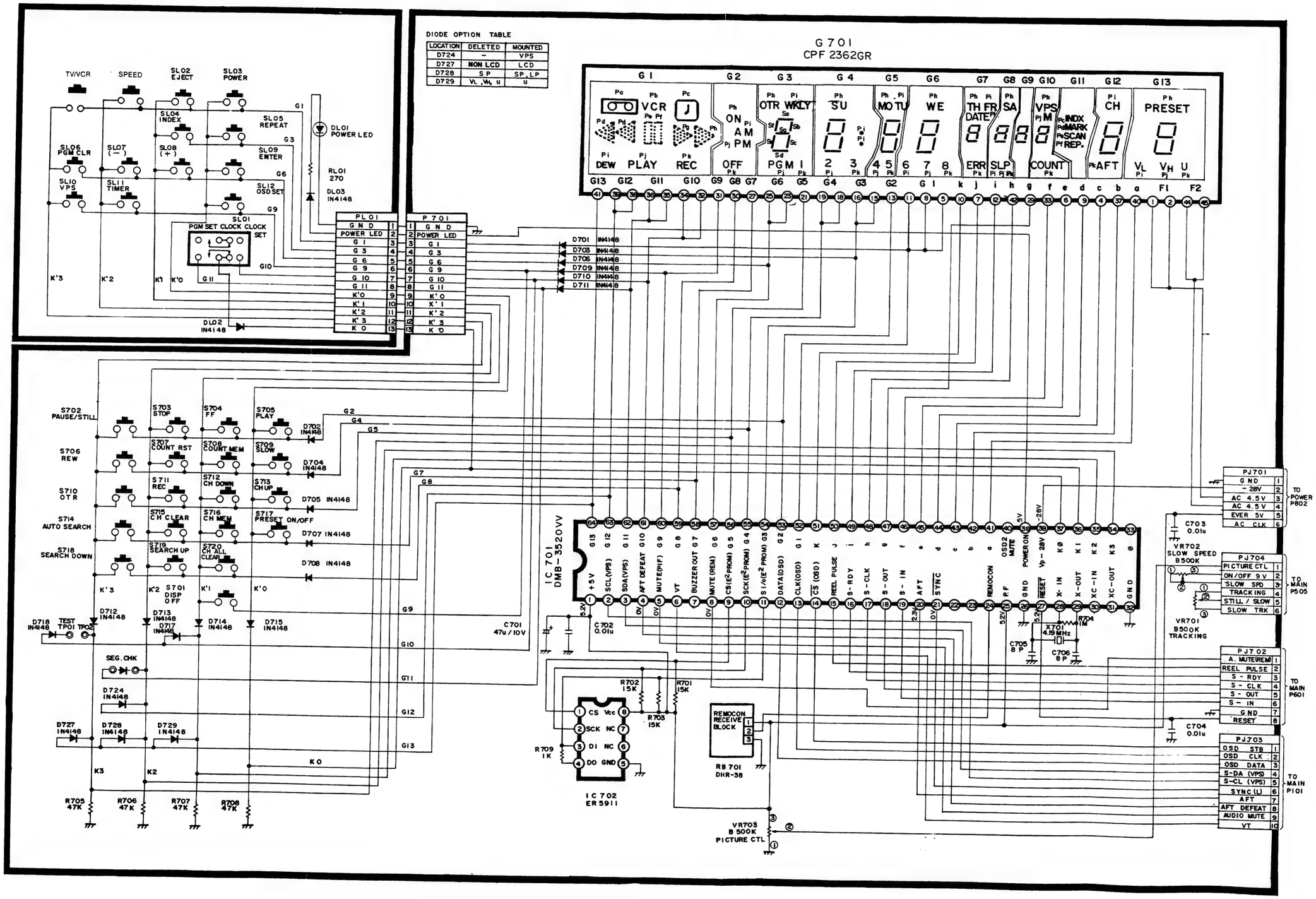
3-5. U302 PRE-AMP CIRCUIT



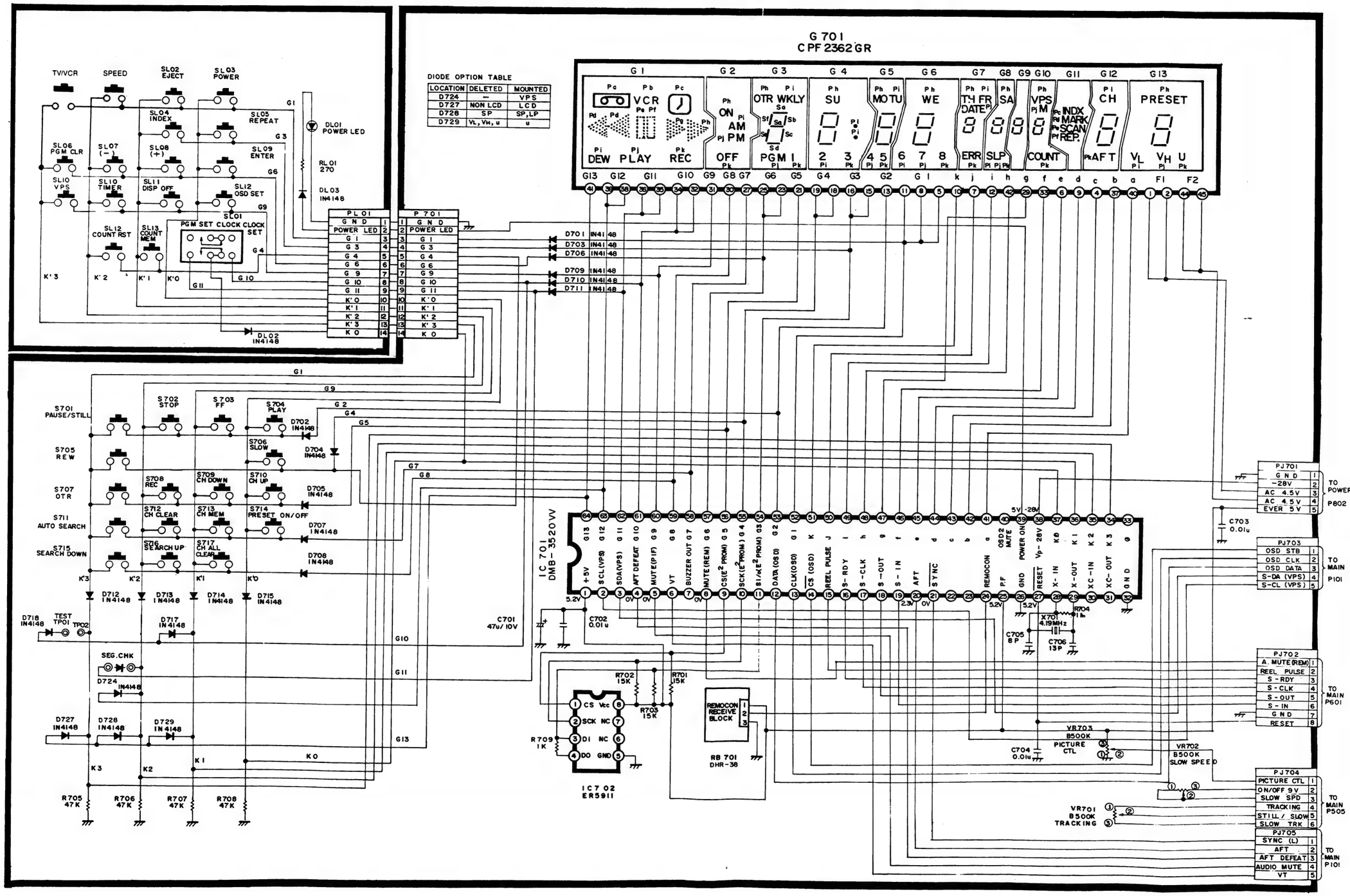
3-6. U501 SERVO LOGIC CIRCUIT (DVR-6158D, 6358D, 6154D, 6354D)



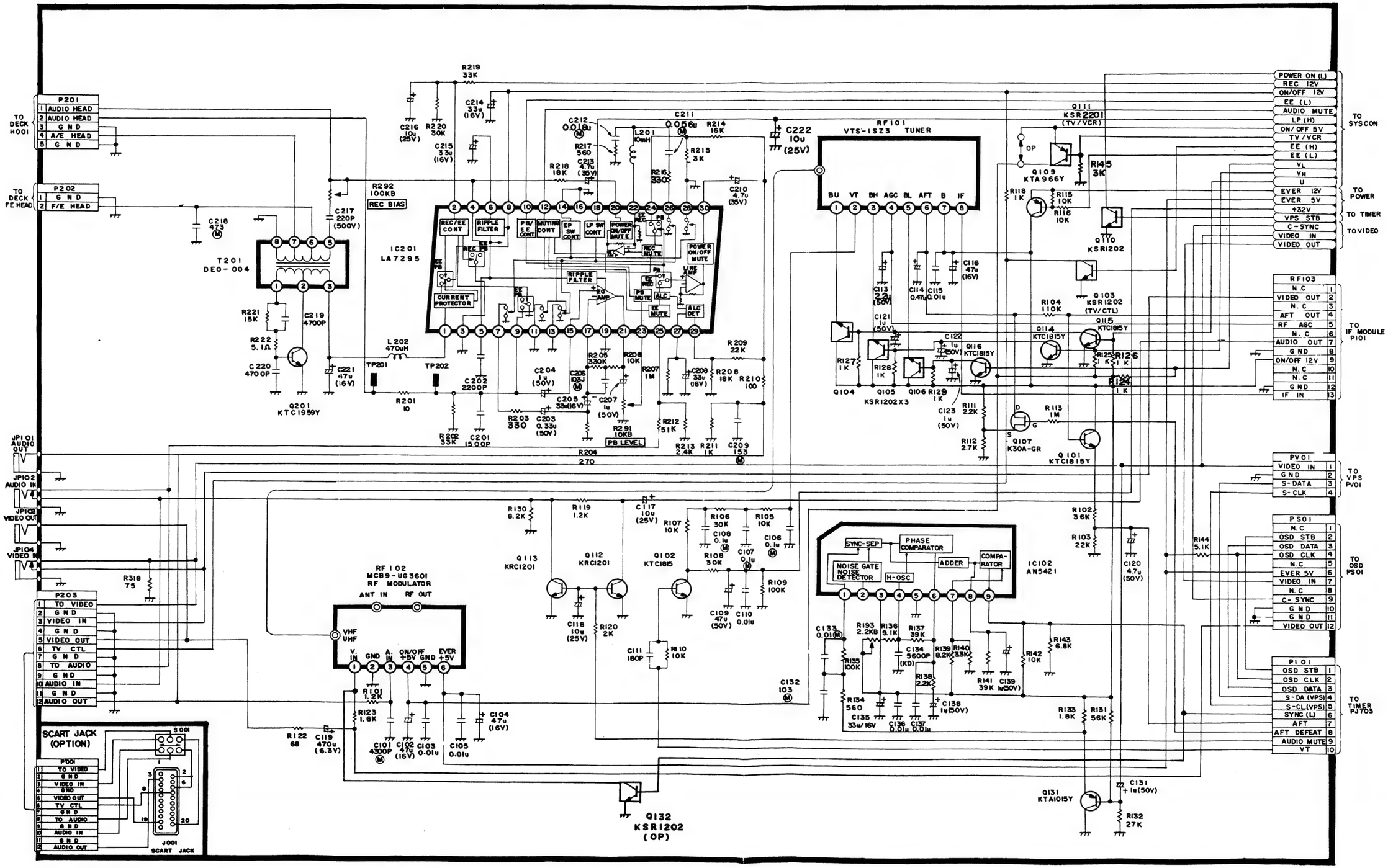
3-7. U701 TIMER I CIRCUIT (DVR-6158D, 6154D)



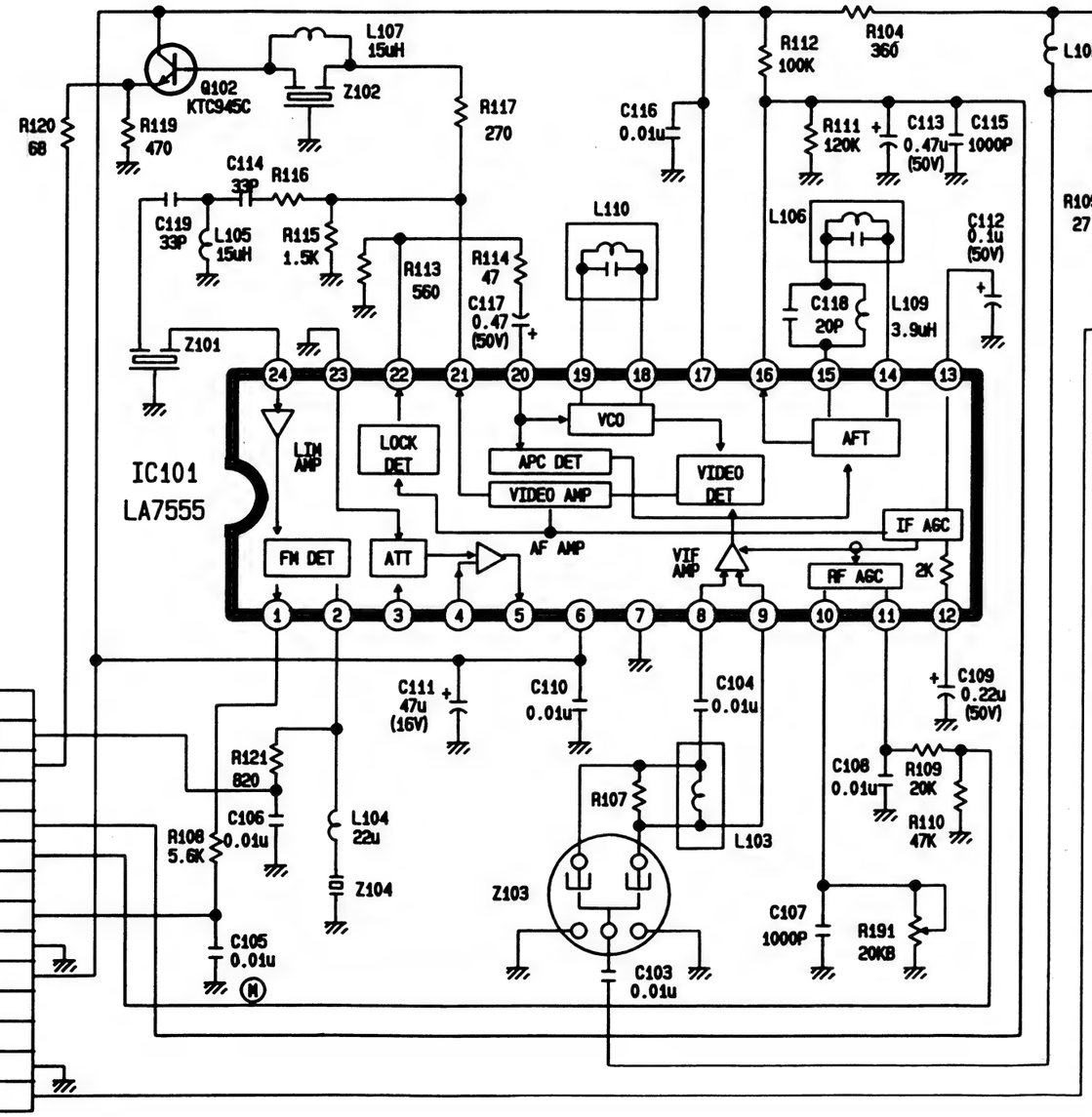
3-8. U701 TIMER II CIRCUIT (DVR-6358D, 6354D)



3-9. U501 PIF AUDIO I CIRCUIT (DVR-6158D, 6358D, 6154D, 6354D)



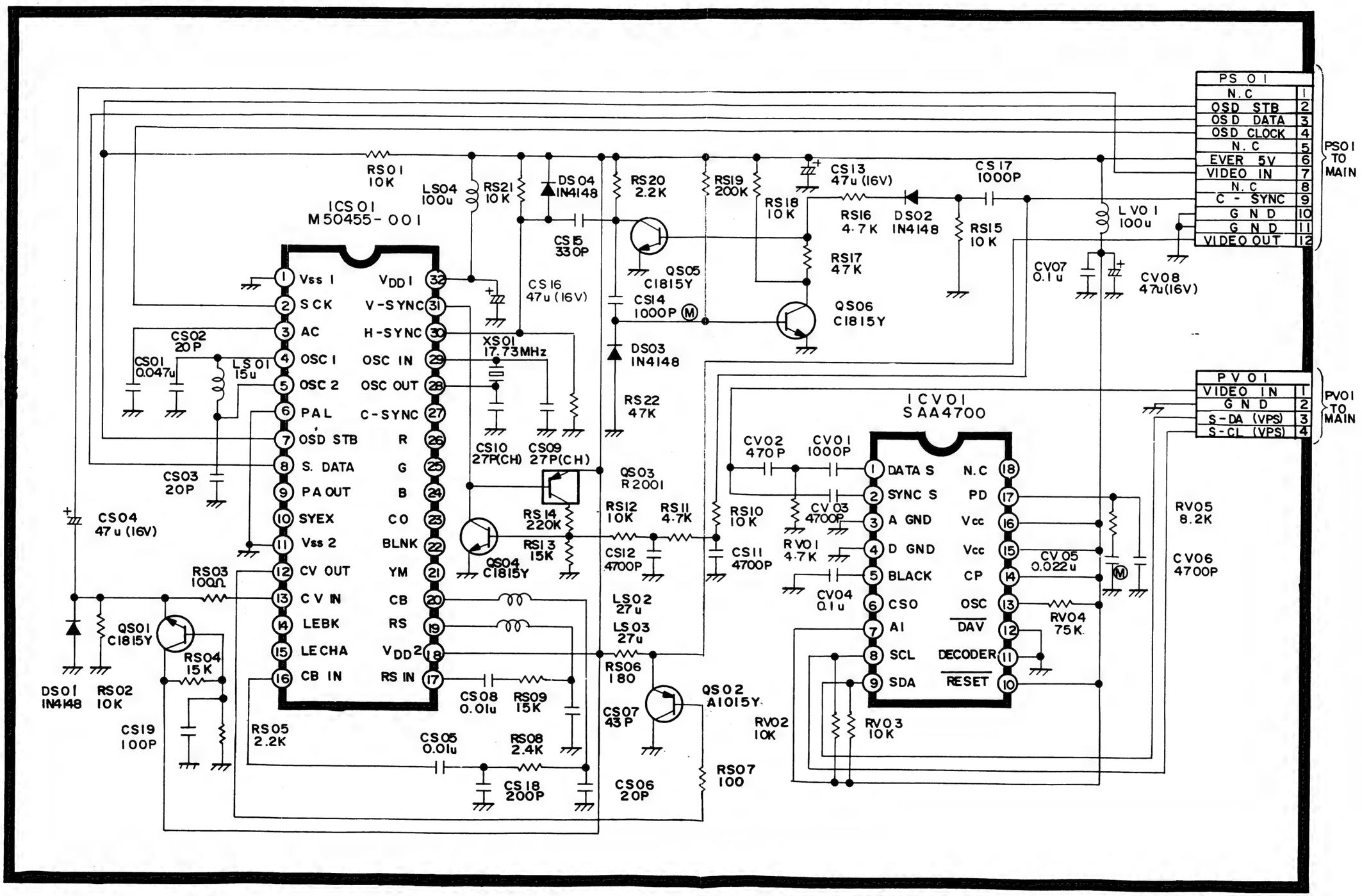
-10. IF MODULE CIRCUIT (DVR-6158D, 6358D, 6154D, 6354D)



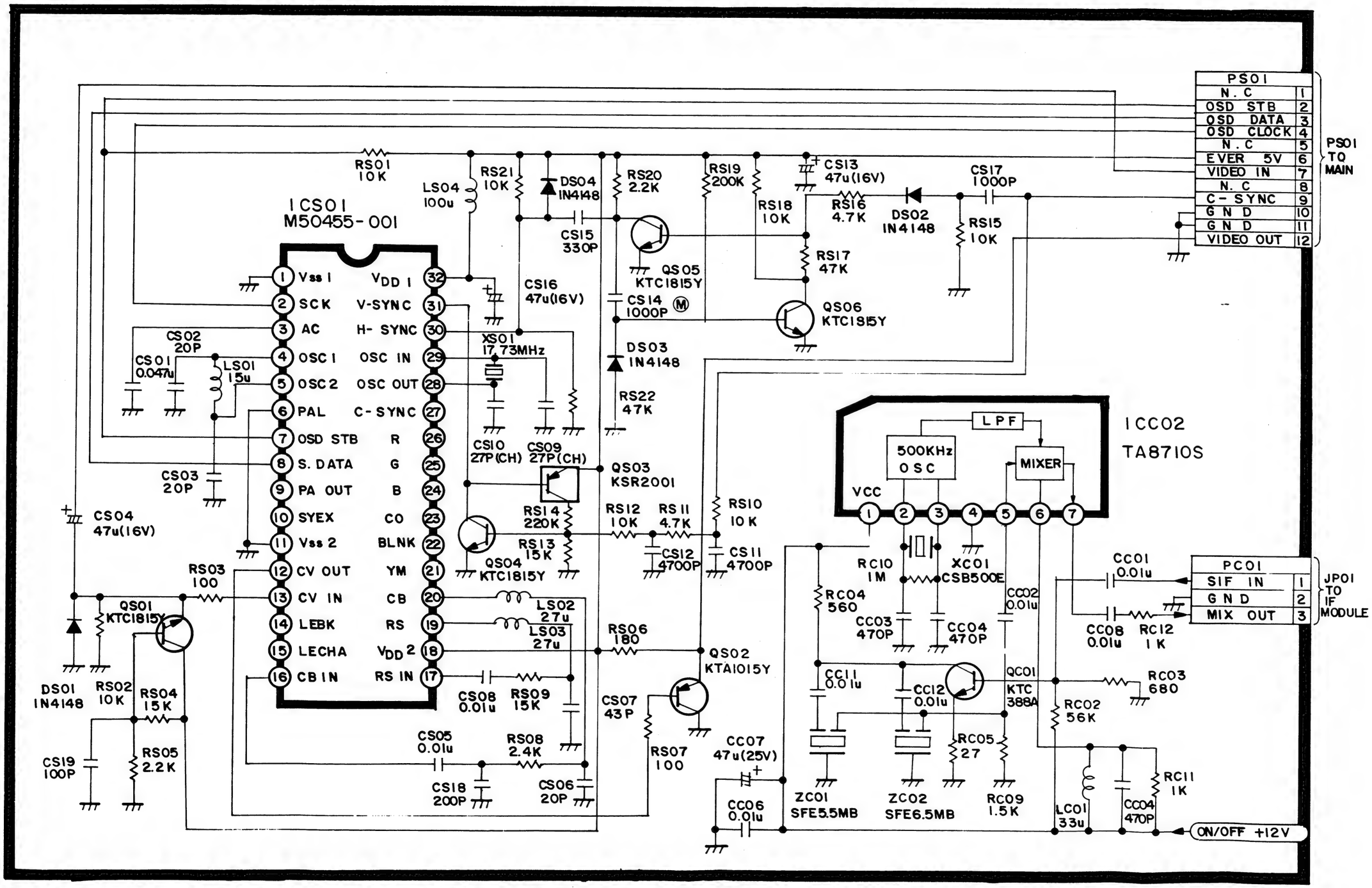
IF MODEULE CIRCUIT ELEMENT TABLE

S/N / LOC.	NTSC (KOR)	NTSC (JPN)	PAL B/G (FTZ)	PAL B/G (AUS)	PAL I (U K)	PAL I (S. A)	PAL D/K (CHN)	PAL (BB)	PAL (K/D)
	M457KOR	M587JPN	B389GER	B368AST	I393UK-	I399SAF	D380CHN	B3896N-	D3800RD
	97PA237600		97PA136700	97PA136800	97PA139100	97PA138900	97PA139000	97PA141800	97PA145700
R101	100	100	220	100	100	100	100	220	100
R107	1.0K	1.1K	1.3K	1.8K	1.5K	1.2K	1.8K	1.3K	1.8K
R116	1.0K	1.0K	620	620	470	470	470	620	470
C118	18P	18P	20P	20P	20P	20P	20P	20P	20P
L101	X	X	TRF-1136	X	X	X	X	X	X
L102	TRF-9018		TRF-3810	TRF-1448Q	TRF-9102S	TRF-9201	TRF-1448Q	TRF-3810	TRF-1448Q
L103	TRF-9017		TRF-3813	TRF-3615	TRF-3813	TRF-3812	TRF-3615	TRF-3813	TRF-3615
L106	TRF-4591		TRF-3882	TRF-3691	TRF-3882	TRF-3882	TRF-3691	TRF-3882	TRF-3691
L110	TRF-4527		TRF-3824	TRF-3824Z	TRF-3824	TRF-3824	TRF-3824Z	TRF-3824	TRF-3824Z
Z101	SFE4.5MB	SFE4.5MB	SFE5.5MB	SFE5.5MB	SFE6.0MB	SFE6.0MB	SFE6.5MB	SFE5.5MB	SFE6.0MB
Z102	TPS4.5MC	TPS4.5MC	TPS5.5MB	TPS5.5MB	TPS6.0MB	TPS6.0MB	TPS6.5MB	TPS5.5MB	TPS5.5MB
Z103	F1032U	F1031A	F1034B	F1033	F1035	F1027C	F1026V	F1034B	F1026V
Z104	CDA4.5ME20	CDA4.5ME20	CDA5.5ME20	CDA5.5ME20	CDA6.0ME20	CDA6.0ME20	CDA6.5ME20	CDA5.5ME20	CDA6.0ME20

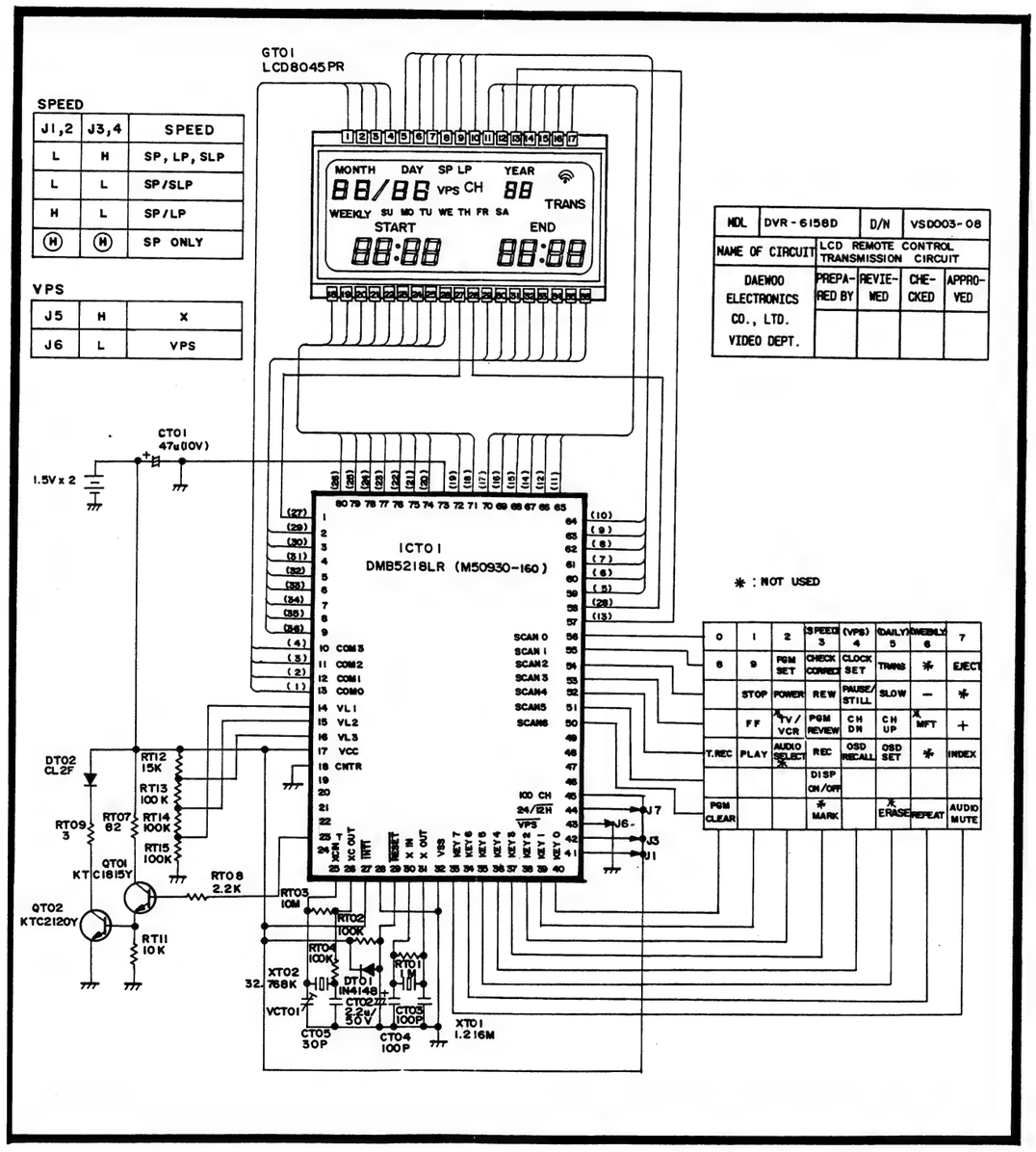
3-11. US01 OSD VPS CURCUIT (OSD VPS: DVR-6158D, 6358D)
(OSD ONLY: DVR-6154D, 6354D)



3-12. US02 OSD SOUND CONVERTER CIRCUIT (DVR-6154D (KG), 6354D (KG)



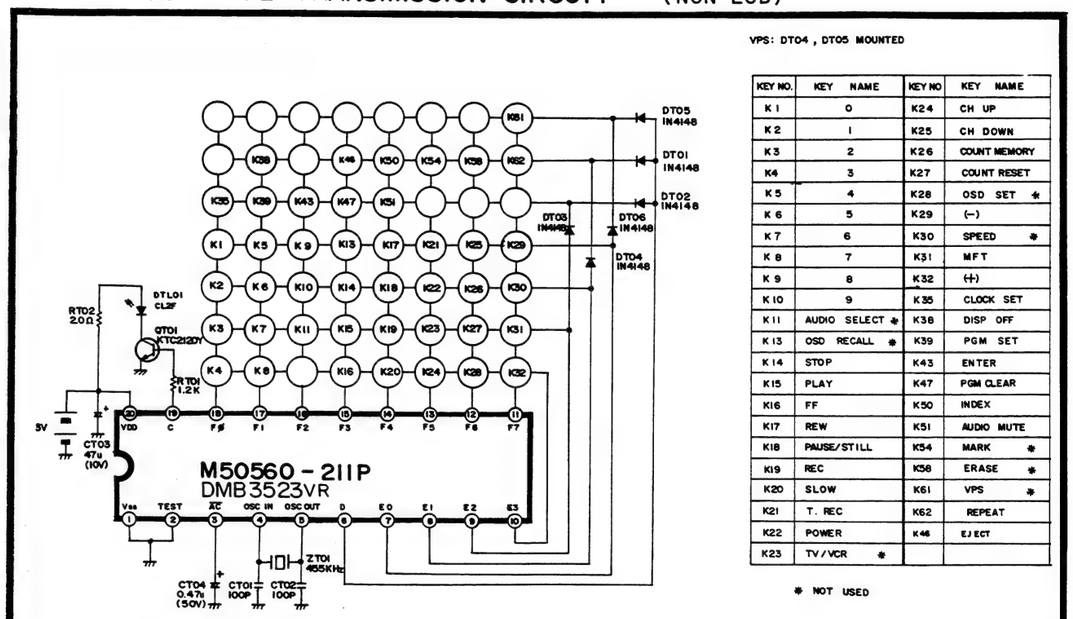
3-13. LCD REMOTE CONTROL TRANSMISSIONS CIRCUIT



MDL	DVR-6158D		D/N	VSD003-08
NAME OF CIRCUIT	LCD REMOTE CONTROL TRANSMISSION CIRCUIT			
DAEWOO ELECTRONICS CO., LTD. VIDEO DEPT.	PREPARED BY	REVIEWED	CHECKED	APPROVED

3-14. REMOTE CONTROL TRANSMISSION CIRCUIT (NON LCD)

REMOTE CONTROL TRANSMISSION CIRCUIT (NON LCD)



KEY NO.	KEY NAME	KEY NO	KEY NAME
K1	0	K24	CH UP
K2	1	K25	CH DOWN
K3	2	K26	COUNT MEMORY
K4	3	K27	COUNT RESET
K5	4	K28	OSD SET *
K6	5	K29	(-)
K7	6	K30	SPEED *
K8	7	K31	MFT
K9	8	K32	(+)
K10	9	K35	CLOCK SET
K11	AUDIO SELECT *	K38	DISP OFF
K13	OSD RECALL *	K39	PGM SET
K14	STOP	K43	ENTER
K15	PLAY	K47	PGM CLEAR
K16	FF	K50	INDEX
K17	REW	K51	AUDIO MUTE
K18	PAUSE/STILL	K54	MARK *
K19	REC	K58	ERASE *
K20	SLOW	K61	VPS *
K21	T. REC	K62	REPEAT
K22	POWER	K46	EJECT
K23	TV/VCR *		

* NOT USED

SECTION 4. VOLTAGE OF SEMI-CONDUCTORS

4-1. ICS

MAIN PCB

	IC 501		IC 502		IC 503		IC 504		IC 601		IC 602		IC 201	
NO.	PB	REC	PB	REC	PB	REC	SLOW		PB	REC	PB	REC	PB	REC
1	2.4	2.9	2.2	2.2	2.5	2.5	3.8		5.1	5.1	0	0	0.3	11.0
2	0	0	2.5	2.5	2.5	2.5	8.0		0.1	0.1	0.5	0.5	0	4.8
3	0.7	0.7	2.5	2.5	2.5	2.5	0		4.4	0.1	0.5	0.5	0	0
4	0	0	12.3	12.3	5.0	5.0	3.4		4.3	0.1	0	0	0	0
5	3.3	3.3	2.4	2.4	0.3	0.3	0.2		0	0	0	0	7.9	7.9
6	2.8	2.8	2.4	2.4	0.3	0.3	0.3		0	0	0	0	9.1	9.1
7	0.3	0.3	2.0	2.0	3.8	3.8	3.0		0	0	12.3	12.3	0	0
8	2.4	2.4	5.0	5.0	2.3	2.3	1.8		0	0	12.3	12.3	12.0	12.0
9	2.1	2.1	5.0	5.0	2.3	2.3	0		0	0	12.3	12.3	0	0
10	0	0	5.0	5.0	2.3	2.3	0.5		5.0	5.0	0.5	0.5	5.1	0
11	0	0	0	0	0	0	0.2		5.0	5.0			0	0
12	0.1	0.1	5.6	5.6	2.3	2.3	0		5.0	5.0			0	0
13	5.0	5.0	5.6	5.6	2.3	2.3	4.0		5.0	5.0			0	0
14	0	0	5.6	5.6	2.2	2.2	0		4.8	4.8			0	0
15	0.1	0.1					2.2		4.7	4.7			2.2	2.2
16	0.1	0.1					0.1		4.7	4.7			0	0
17	2.8	2.8					2.0		0	0			2.3	2.3
18	3.0	3.0					9.3		4.3	4.3			0	0
19	3.1	3.1							3.5	3.5			0	0
20	3.2	3.2							2.0	2.0			3.8	3.9
21	0	0							2.7	2.7			2.4	2.4
22	2.5	2.5							2	3.0			1.3	1.3
23	2.4	2.4							0	0			0	0
24	5.0	5.0							0	0			0	0
25	0	0							0	0			0	0
26	2.5	2.5							3.8	3.8			0	0
27	0	0							0	0			0.3	0
28	0 0								5.1	5.1			0	0
29	4.3	0							2.6	2.6			0	0
30	4.3	0							1.6	1.6			3.9	3.9
31	0	0							2.5	2.5				
32	0	0							0	0				
33	0	0							5.1	5.1				
34	0	0							0	0				
35	0	0							0	0				
36	2.4	2.4												
37	2.4	2.4							0	0				
38	5.0	5.0							2.1	2.1				
39	2.5	2.5							2.9	2.9				
40	2.4	2.4							2.3	2.3				
41	5.0	5.0							0	0				
42	0	0							0	0				
43									0	0				
44									0.7	0.7				
45									0.7	0.7				
46									0.1	0.1				
47									0	0				
48									0	0				
49									0	0				
50									0.1	0.1				
51									5.0	5.0				
52									4.2	4.2				
53									5.1	5.1				
54									0	0				
55									0	0				
56									5.0	5.0				
57									0.2	0.2				
58									0	0				
59									0	0				
60									5.1	5.1				
61									0	0				
62									0	0				
63									0	0				
64									0	0				

VIDEO PCB

NO	IC 301		IC 302		IC 401	
	PB	REC	PB	REC	PB	REC
1	3.6	2.3	9.0	9.0	0.2	0.2
2	2.7	2.6	0	0	1.6	1.3
3	2.3	2.4	4.8	4.8	2.9	2.9
4	0.1	0.1	3.4	3.4	2.3	2.3
5	4.5	2.6	3.4	3.4	2.4	1.6
6	1.1	3.4	2.4	2.4	0	0
7	2.2	2.7	1.6	1.6	2.9	2.9
8	0	0	5.2	5.2	2.7	2.7
9	3.4	1.0			3.0	1.6
10	3.4	3.4			2.7	2.7
11					2.4	2.4
12	2.8	2.8			1.8	1.8
13	3.0	4.3			4.4	4.4
14	3.0	4.3				
15	4.0	4.3			2.3	2.3
16	3.4	3.4			4.6	4.6
17					4.6	4.6
18	2.4	2.4			2.0	2.7
19	4.2	4.2			3.6	3.6
20	0	0			4.7	4.7
21	2.4	2.4			1.6	1.6
22	4.9	4.9			0.4	
23	3.2	3.7			1.7	2.1
24	3.1	3.1			3.1	3.0
25	3.9	2.9				
26	3.5	3.4				
27	1.0	1.4				
28						
29	3.4	3.7				
30	4.0	3.5				

NO	IC 101
	PB/REC
1	4.4
2	1.3
3	5.6
4	4.4
5	5.0
6	12.0
7	0
8	4.5
9	4.5
10	4.2
11	7.2
12	7.1
13	7.1
14	3.9
15	3.9
16	6.5
17	12.0
18	10.7
19	10.7
20	4.9
21	4.8
22	0
23	0
24	1.9

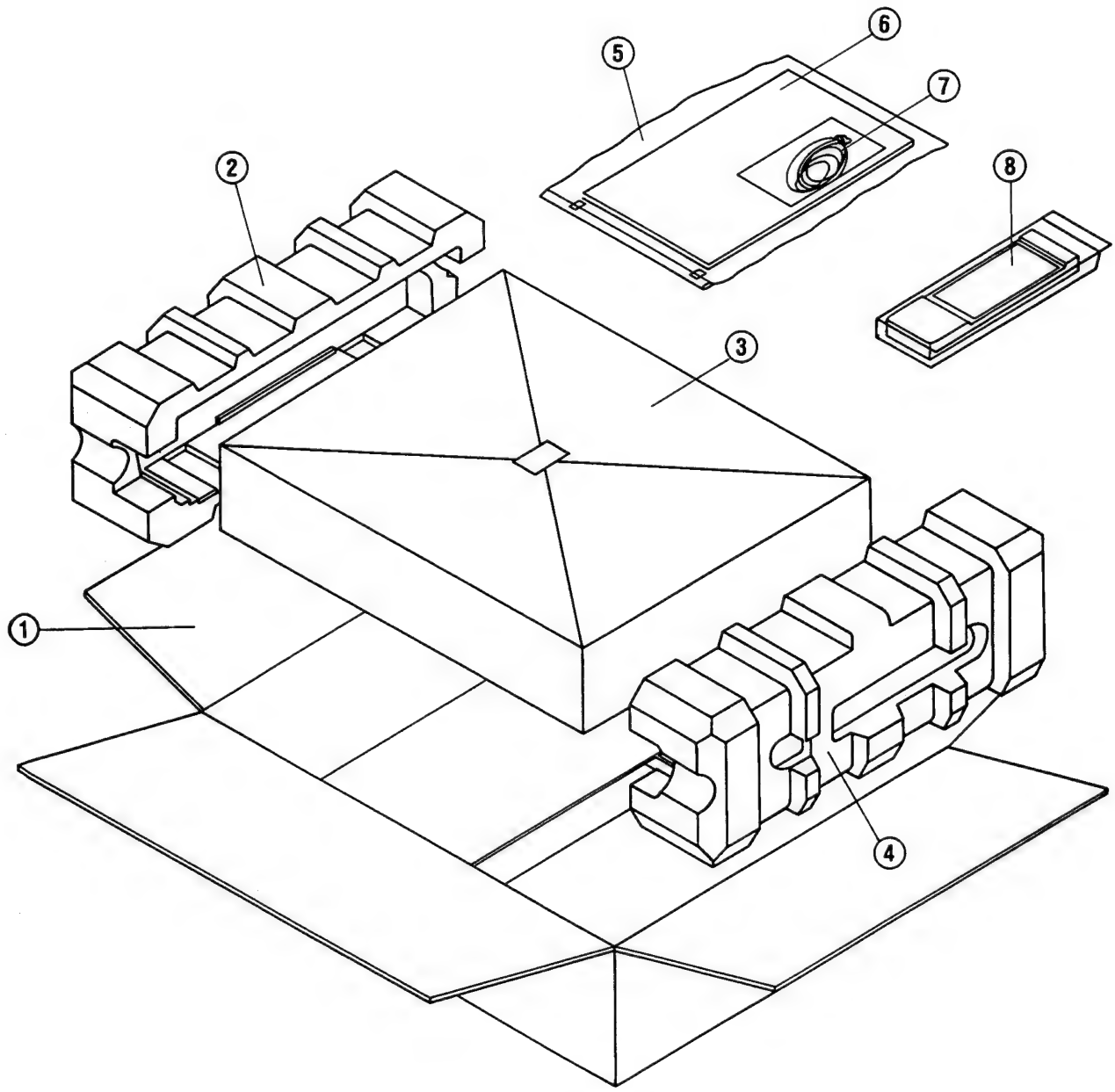
4-2. TRANSISTORS

LOC	MAIN PCB					
	PB MODE			REC MODE		
	E	C	B	E	C	B
Q201	0	0.3	0.3	0	11.0	0
Q501	1.1	0.7	0.6	1.1	0.7	0.6
Q502	2.3	5	3.0	2.3	5	3.0
Q503	0	0.1	0.7	0	0.1	0.7
Q504	2.3	2.4	0.1	2.3	2.4	0.1
Q505	0	5.1	0.1	0	5.1	0.1
Q506	5.0	0	4.1	5.0	0	4.1
Q507	9.3	12.3	10.0	9.3	12.3	10.0
Q508	0	2.5	0	0	2.5	0
Q601	0	0	4.4	0	0	4.4
Q602	5.0	5.0	4.2	5.0	0	5.0
Q603	0	0	4.3	0	0.7	0.1
Q604	12.2	0	12.3	12.2	12.1	11.4
Q605	0	5.1	0	0	5.1	0
Q611	5.1	5.1	0	5.1	0	5.1
Q612	0	12.3	0.7	0	0	4.7
Q613	0	0	0	0	0	0
Q614	0	0	5.1	0	0	5.1
Q617	0	12.3	0	0	12.3	0
Q618	0	12.3	0	0	0	0.7
Q619	0	0	5.0	0	0	5.0

LOC	VIDEO PCB					
	PB MODE			REC MODE		
	E	C	B	E	C	B
Q301	1.7	0	1.1	1.9	0	1.3
Q302	0.4	3.5	1.1	0.7	3.0	1.3
Q303	2.9	4.8	3.5	2.3	4.8	2.9
Q304	2.7	4.8	3.3	2.6	4.8	3.3
Q305	1.5	0	0.9	1.5	0	0.9
Q306	3.0	4.8	3.6	0	0	0
Q307	0.7	3.6	1.3	0	0	0
Q308	3.0	1.7	2.4	0	0	0
Q309	1.6	4.8	2.2	1.6	4.8	2.2
310	0		0	0	0	0.6
Q311	0	0	4.9	0	0.6	0
Q401	3.0	4.8	3.7	1.6	0	0
Q402	2.6	3.7	3.2	0	0	0
Q403	1.1	0	0.4	0.8	0	0.2
Q404	0.6	3.0	1.3	0.6	3.0	1.3
Q405	2.3	4.7	3.0	2.3	4.7	3.0
Q406	1.4	4.7	2.0	2.0	4.7	2.7
Q408	1.7	3.0	2.3	0	0	0

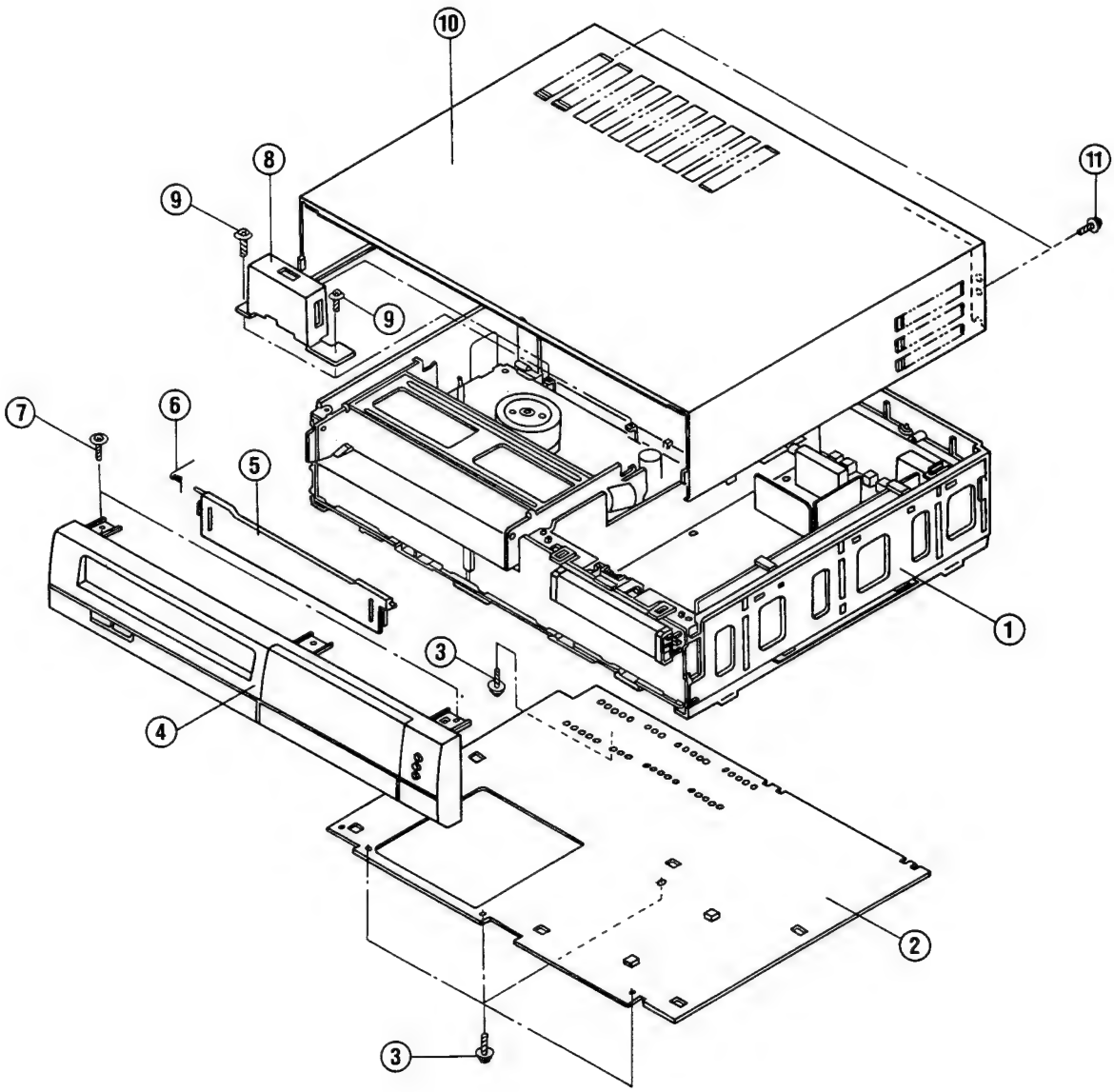
SECTION 5. EXPLODED VIEWS AND PARTS LIST

5-1. PACKING ASSEMBLY (6158D, 6154D)



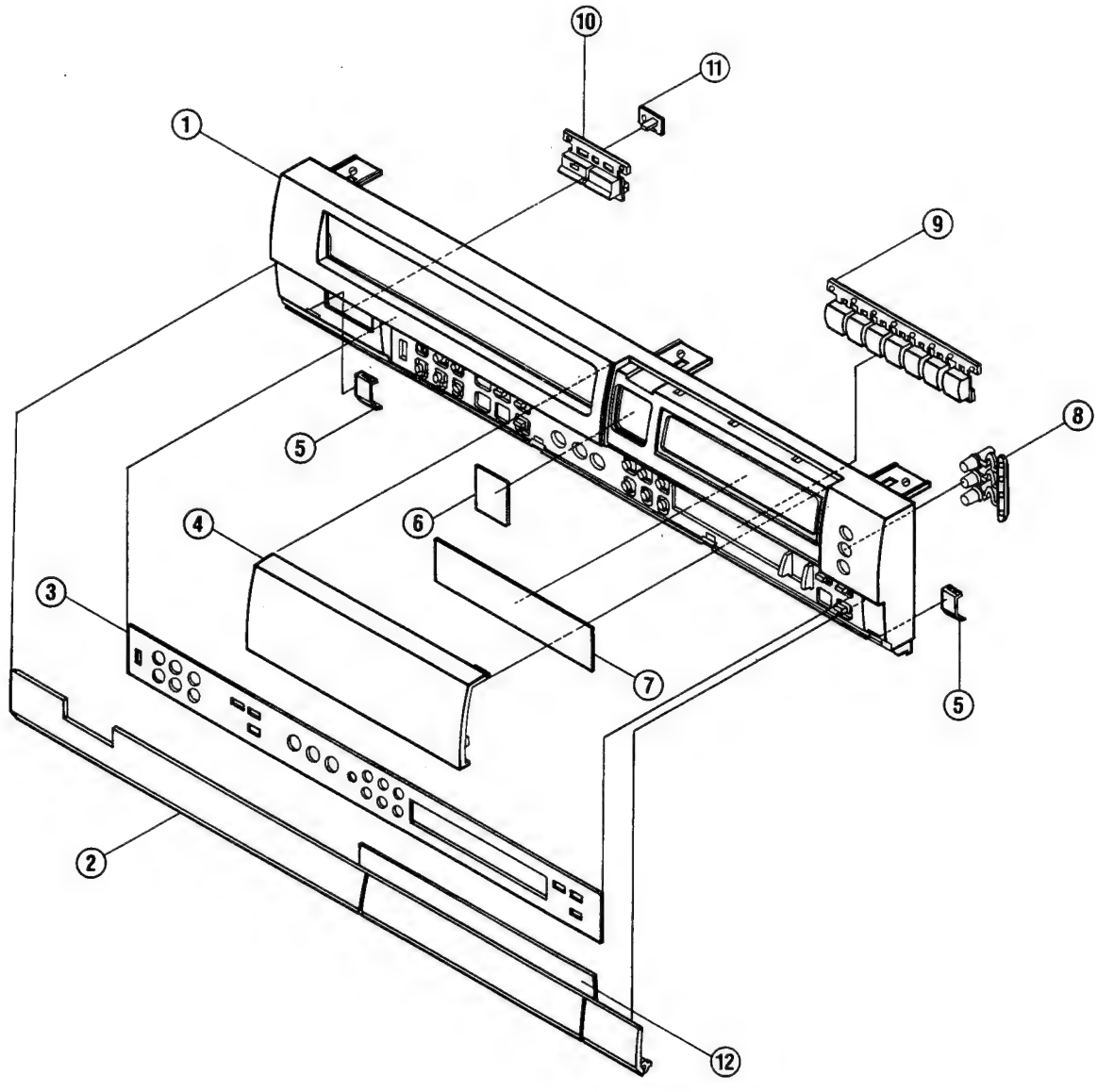
NO.	STOCK NUMBER	PART NAME	Q'TY	REMARK
1	97P5015101	BOX CARTON	1	
2	97P4907400	PAD LEFT	1	
3	97P4801300	POLYBAG FORSET	1	
4	97P4907300	PAD RIGHT	1	
5	97P0424100	COVER ACCESSORY	1	
6	97P9514801	MANUAL OWNER'S	1	
7	85401050BK	CABLE AS	1	
8	97P1R11D00	REMO HANDSET AS	1	

5-2. OVERALL SET (6158D, 6154D)



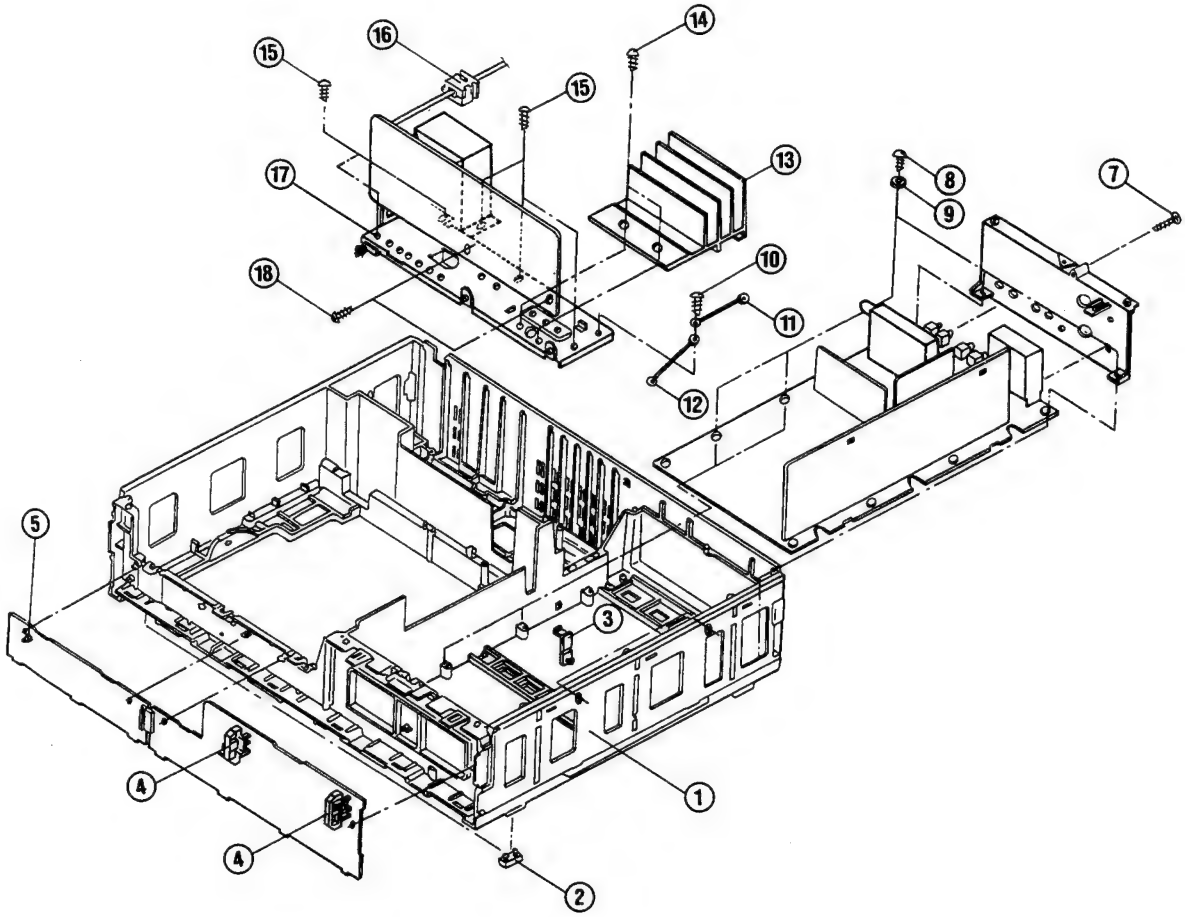
NO.	STOCK NUMBER	PART NAME	Q'TY	REMARK
1	97PA138201	CHASSIS MAIN AS	1	
2	97P0426200	COVER BOTTOM	1	
3	7124401211	SCREW TAPPING	5	
4	97PA138301	PANEL FRONT AS	1	
5	97P18017C1	DOOR F/L	1	
6	97P3015400	SPRING F/L DOOR	1	
7	7624300811	SCREW TAPPING	2	
8	97PA138100	PREAMP PCB AS	1	
9	7604300811	SCREW MACHINE	2	
10	97P0425800	COVER TOP	1	
11	7123401212	SCREW TAPPING	2	

5-3. PANEL FRONT ASSEMBLY (6158D, 6154D)



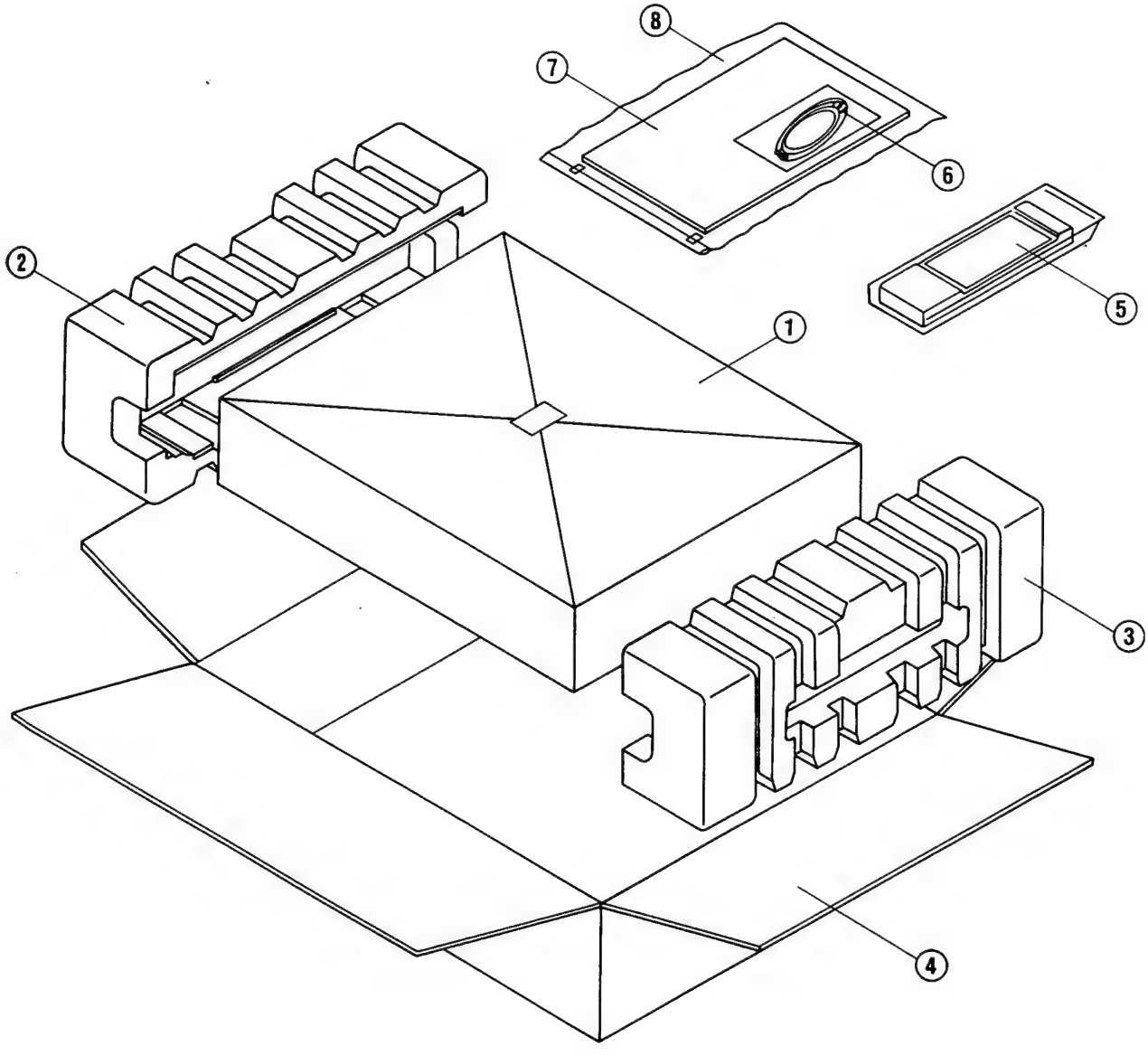
NO.	STOCK NUMBER	PART NAME	Q'TY	REMARK
1	97P0302901	PANEL FRONT	1	
2	97P1804601	DOOR FRONT	1	
3	97P0924801	PLATE TIMER	1	
4	97P1605100	WINDOW FRONT	1	
5	97P3022200	SPPING DOOR	2	
6	97P4702100	FILTER REMOCON	1	
7	97P4702000	FILTER DIGITRON	1	
8	97P1317300	KNOB CHANNEL	1	
9	97P1317400	KNOB FUNCTION	1	
10	97P1317200	KNOB POWER	1	
11	97P1704500	INDICATOR POWER	1	
12	97P9324100	LABEL TIMER	1	

5-4. MAIN CHASSIS (6158D, 6154D)



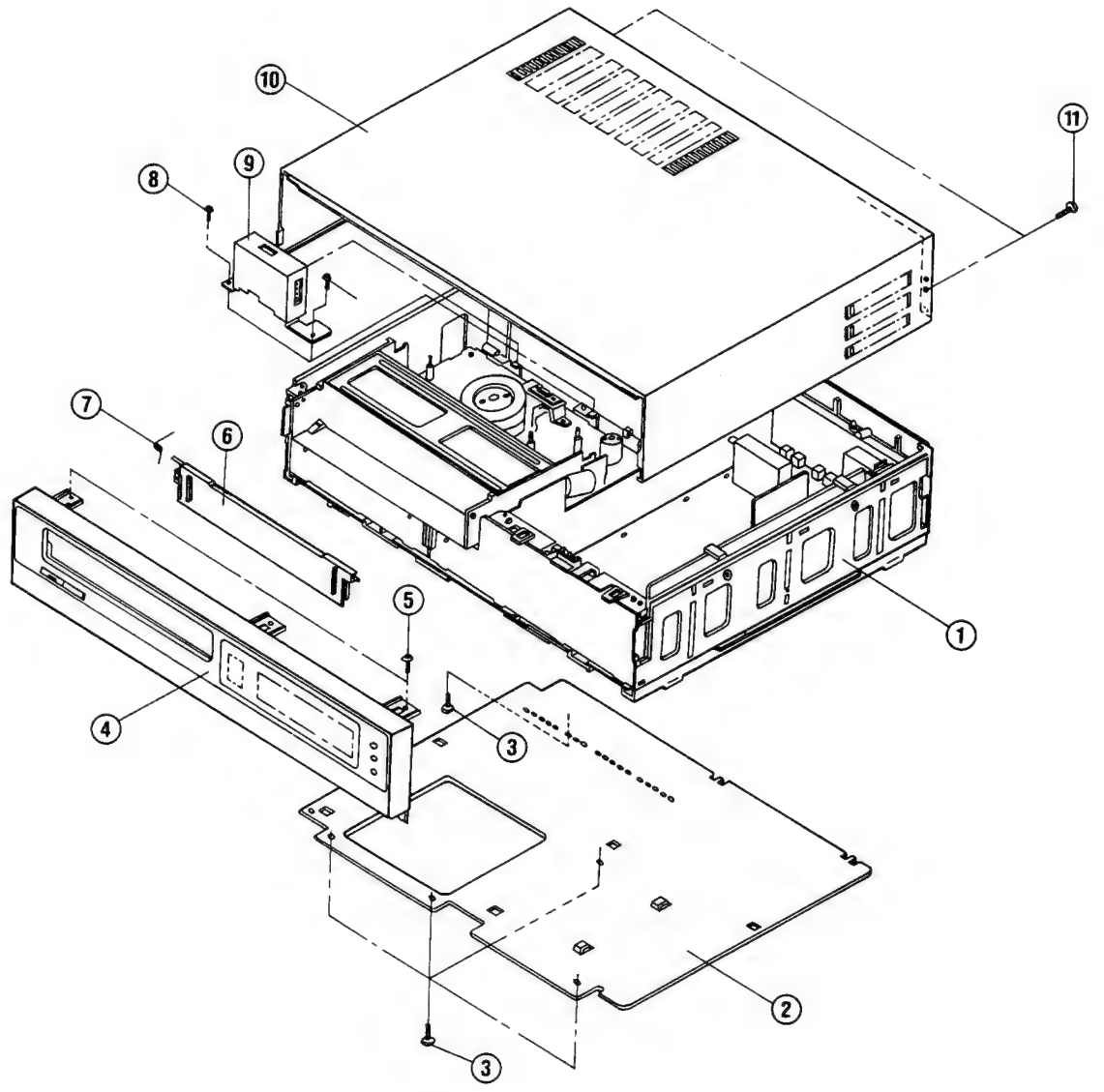
NO.	STOCK NUMBER	PART NAME	Q'TY	REMARK
1	97P0603800	CHASSIS MAIN	1	
2	97P0800500	1EG	2	
3	97P2315900	PCB HOLDER	2	
4	97P2318600	HOLDER DIGITRON	2	
5	97P2315000	HOLDER LED	1	
6	97P0701800	BOARD ANTENNA	1	
7	7123301212	SCREN TAPPING	1	
8	97P3108400	SCREW PCB	4	
9	97P3108500	WASHER PCB	4	
10	7624300811	SCREW TAPPING	1	
11	97P8801100	LUG AS	1	
12	97P8802607	LUG AS	1	
13	97P4403400	RADIATOR POWER	1	
14	7624301211	SCREW TAPPING	2	
15	7124401211	SCREW TAPPING	5	
16	97P2316600	HOLDER AC CORD	1	
17	97P2421600	BRKT POWER	1	
18	7624300811	SCREW TAPPING	2	

5-5. PACKING ASSEMBLY (6358D, 6354D)



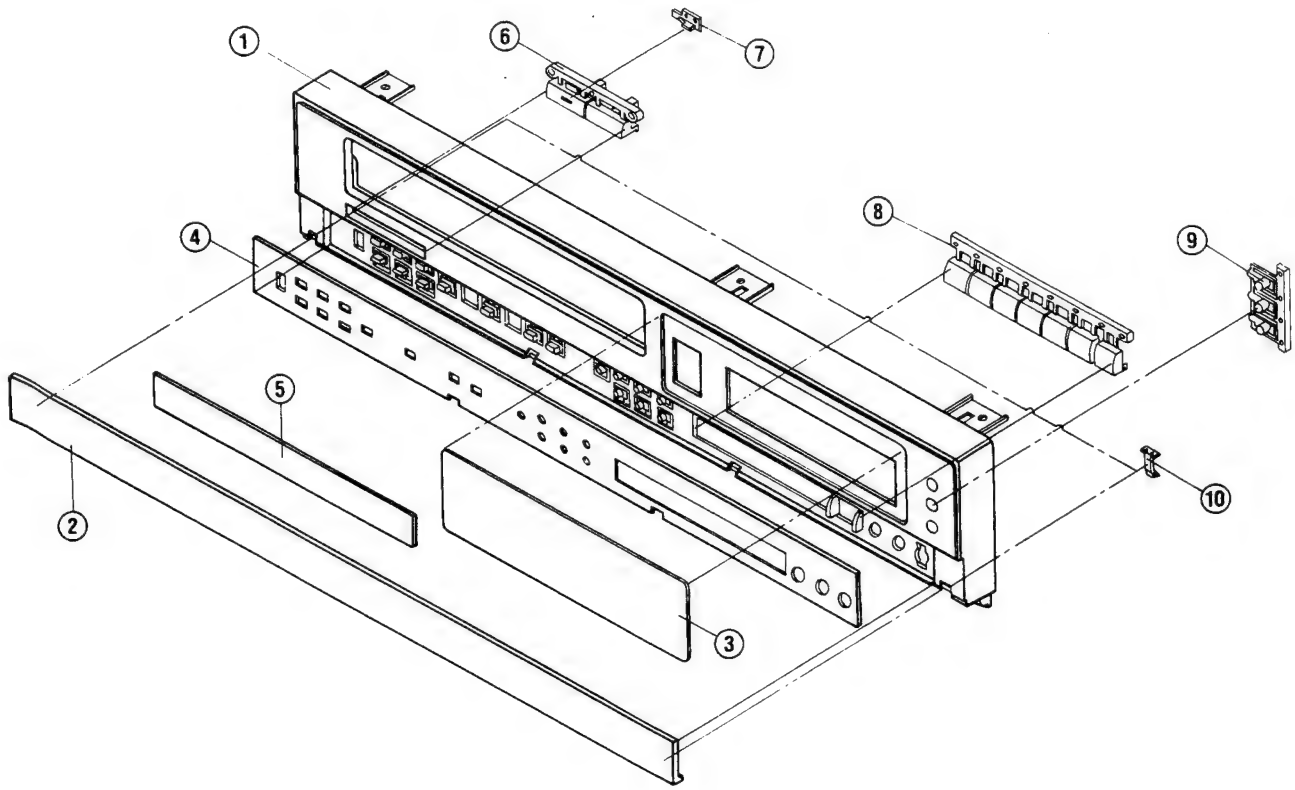
NO.	STOCK NUMBER	PART NAME	Q'TY	REMARK
1	97P4801300	POLYBAG FORSET	1	
2	97P4906200	PAD LEFT	1	
3	97P4906100	PAD RIGHT	1	
4	97P5015301	BOX CARTON	1	
5	97P1R11000	REMO HANDSET AS	1	
6	85401050BK	CABLE AS	1	
7	97P9514901	MANUAL OWNERS	1	
8	97P0424100	COVER ACCESSORY	1	

5-6. OVERALL SET (6354D, 6354D)



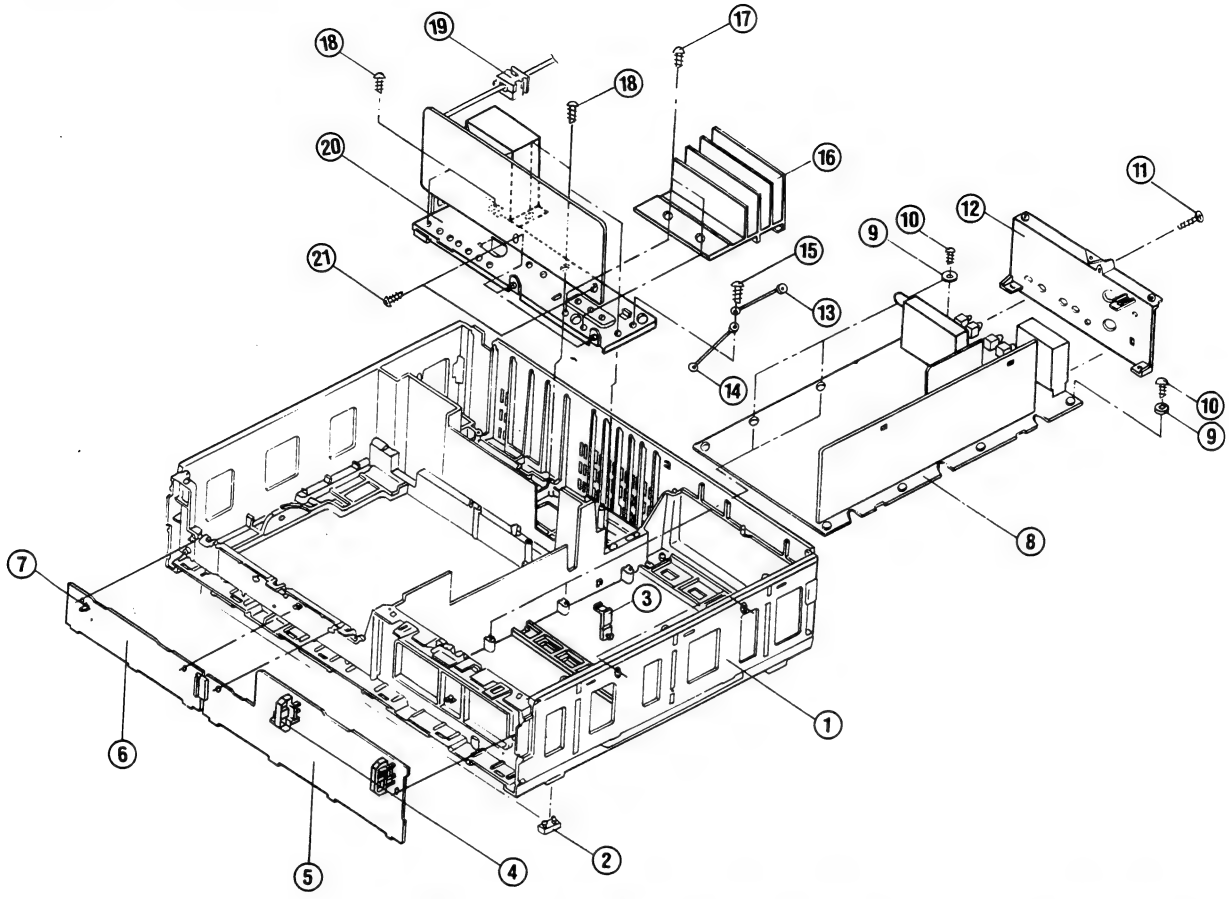
NO.	STOCK NUMBER	PART NAME	Q'TY	REMARK
1	97PA137801	CHASSIS MAIN AS	1	
2	97P0426200	COVER BOTTOM	1	
3	7124401211	SCREW TAPPING	5	
4	97PA137901	PANEL FRONT AS	1	
5	76Z4300811	SCREW TAPPING	2	
6	97P1801701	DOOR F/L	1	
7	97P3015400	SPRING F/L DOOR	1	
8	7604300811	SCREW MACHINE	2	
9	97P653400811	PREAMP PCB	1	
10	97P0425800	COVER TOP	1	
11	7123401212	SCREW TAPPING	2	

5-7. PANEL FRONT ASSEMBLY (6358D, 6354D)



NO.	STOCK NUMBER	PART NAME	Q'TY	REMARK
1	97P0303001	PANEL FRONT	1	
2	97P1804501	DOOR FRONT	1	
3	97P1604501	WINDOW FRONT	1	
4	97P0924901	PLATE TIMER	1	
5	97P9324100	LABEL FIMER	1	
6	97P1317500	KNOB POWER	1	
7	97P1704600	INDICATOR POWER	1	
8	97P1317601	KNOB FUNCTION	1	
9	97P1317700	KNOB CHANNEL	1	
10	97P3022200	SPRING DOOR	2	

5-8. MAIN CHASSIS (6358D, 6354D)

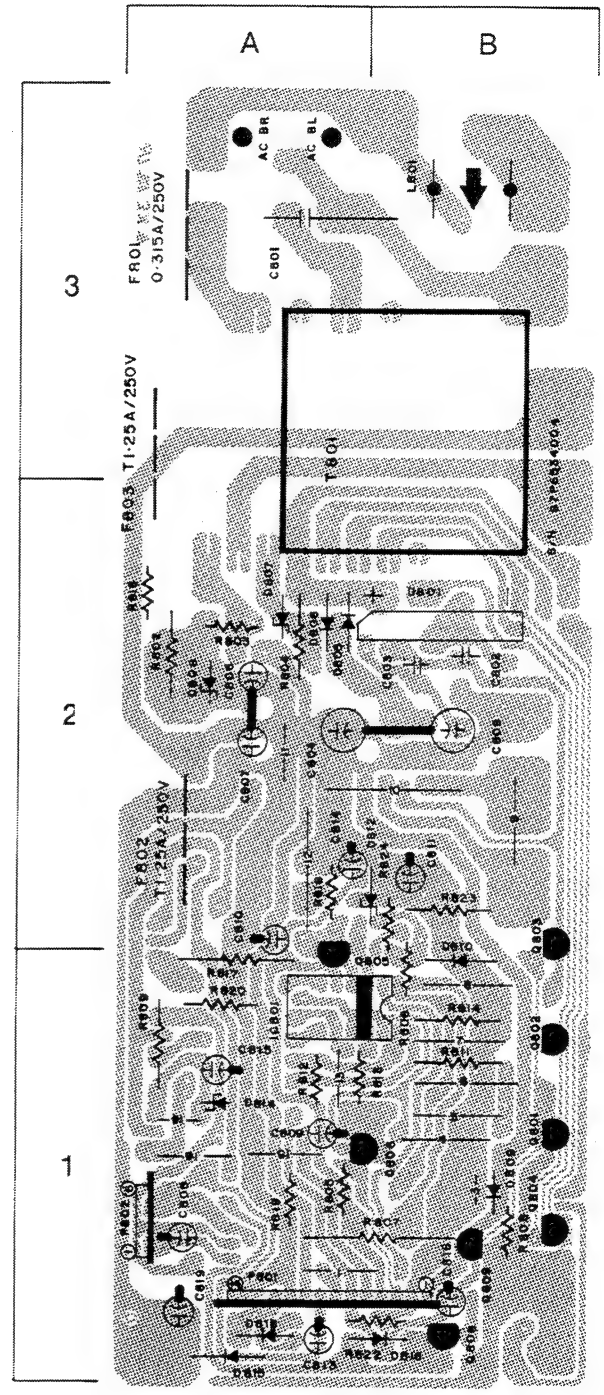


NO.	STOCK NUMBER	PART NAME	Q'TY	REMARK
1	97P0603800	CHASSIS MAIN	1	
2	97P0800500	RUBBER FOOT	2	
3	97P2315900	HOLDER PCB	2	
4	97P2318600	HOLDER DIGITRON-R	2	
5	97P6534007	PCB TIMER	1	
6	97P6534008	PCB LOGIC SW	1	
7	97P2315000	HOLDER LED	1	
8	97P6534002	PCB MAIN	1	
9	97P0800400	WASHER PCB	4	
10	7124401211	SCREW TAPPING	4	
11	7123301212	SCREW TAPPING	1	
12	97P0701800	BOARD ANT	1	
13	97P8801110	LUG ASS'Y	1	
1·	97P8801100	LUG ASS'Y	1	
'5	7624300811	SCREW TAPPING	1	
16	97P4403400	RADI ATOR POWER	1	
17	7624301211	SCREW TAPPING	2	
18	7124401211	SCREN TAPPING	5	
19	97P2316600	HOLDER AC CORD	1	
20	97P2421600	BRKT POWER	1	
21	7624300811	SCREW TAPING	2	

SECTION 6. COMPONENTS LOCATION GUIDE ON PCB (TOP VIEW)

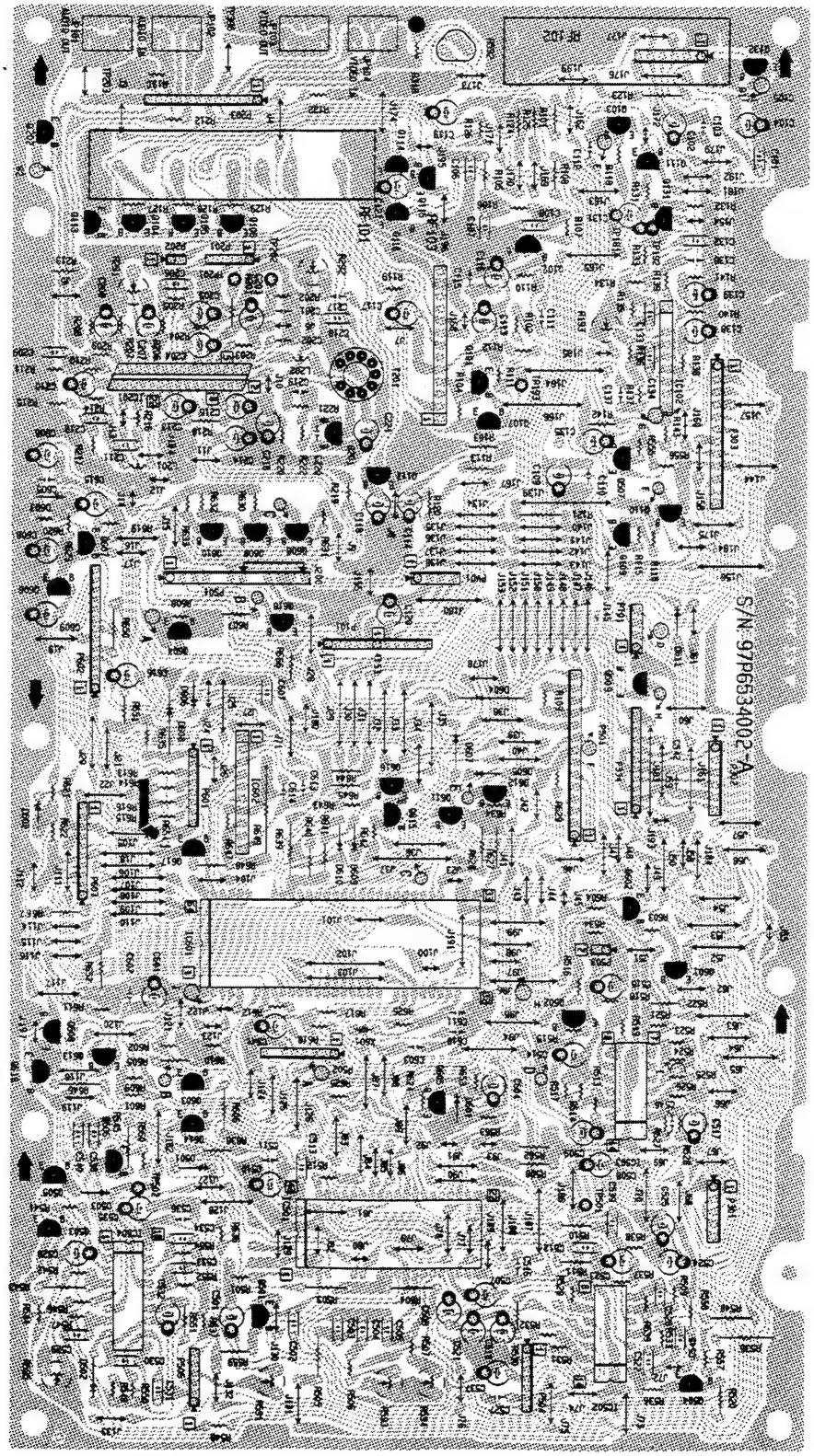
6-1. POWER PCB LOCATION-POSITION

LOC	POS	LOC	POS
C801	A3	L801	B3
C802	B2	P801	A1
C803	B2	P802	A1
C804	A2	Q801	B1
C805	A1	Q802	B1
C806	A2	Q803	B2
C807	A2	Q804	B1
C808	B2	Q805	B2
C809	A1	Q806	B1
C810	A2	Q808	B1
C811	B2	Q809	B1
C813	A1	R802	A2
C814	A2	R803	A2
C815	A1	R804	A2
C816	B1	R805	A1
C819	A1	R806	B1
D801	B2	R807	B1
D805	A2	R808	B1
D806	A2	R809	A1
D807	A2	R811	B1
D808	A2	R812	A1
D809	B1	R813	B1
D810	B2	R814	B1
D812	B2	R816	A2
D814	A1	R817	A1
D815	A1	R818	A2
D816	B1	R819	A1
D818	A1	R820	A1
F801	A3	R822	B1
F802	A2	R823	B2
F803	A3	R824	B2
IC801	A1	T801	A3



6-2. MAIN PCB LOCATIONS-POSITION

LOC	POS	LOC	POS	LOC	POS	LOC	POS	LOC	POS	LOC	POS	LOC	POS
C101	A4	C509	D3	D608	C1	Q503	E1	R134	A4	R523	D4	R612	D2
C102	A4	C510	E2	D609	C2	Q504	E4	R135	B4	R524	D4	R613	C1
C103	A4	C511	D2	D610	C2	Q505	E1	R136	B4	R525	D4	R614	C1
C104	A4	C512	E3	D611	C4	Q506	D1	R137	B4	R526	D4	R615	C1
C105	A4	C513	E2	IC102	B4	Q507	B4	R138	B4	R527	D4	R616	C1
C106	A3	C514	D3	IC201	B1	Q508	D1	R139	A4	R528	D4	R617	D2
C107	A3	C515	D3	IC501	E2	Q601	D4	R140	B4	R529	E3	R618	D2
C108	A3	C516	E3	IC502	E3	Q602	D4	R141	A4	R530	E3	R619	B1
C109	B3	C517	D4	IC503	D4	Q603	D1	R142	B3	R531	E3	R620	B1
C110	B3	C518	E3	IC504	E1	Q604	C1	R143	B4	R532	E3	R621	C1
C111	B3	C521	E3	IC601	D2	Q605	D3	R193	B3	R533	E4	R622	C1
C112	A3	C522	E4	IC602	C2	Q606	C1	R201	B2	R534	E4	R623	B1
C113	B3	C523	E4	JP101	A1	Q607	B1	R202	B2	R535	E4	R624	D3
C114	B3	C524	E4	JP102	A1	Q608	B2	R203	B2	R536	E4	R625	D2
C115	A3	C525	E4	JP103	A2	Q609	B2	R204	B1	R537	E4	R626	D2
C116	A3	C526	E4	JP104	A2	Q610	B2	R205	B1	R538	E4	R627	C3
C117	B2	C527	E3	L201	B1	Q611	C3	R206	B1	R539	E4	R628	C3
C118	B2	C528	E1	L202	B2	Q612	C3	R207	B1	R540	E4	R629	C3
C119	A3	C529	E1	P101	C2	Q613	D1	R208	B1	R541	E1	R630	B2
C120	C2	C530	E1	P201	A2	Q614	D1	R209	B1	R542	E1	R631	B2
C131	A4	C531	E1	P202	A1	Q615	C2	R210	B1	R543	E1	R632	B1
C132	A4	C532	E1	P203	A1	Q616	C2	R211	B1	R544	E1	R633	B1
C133	B4	C533	E1	P301	E4	Q617	C1	R212	A1	R545	D1	R634	C3
C134	B4	C534	E1	P302	C4	Q618	C2	R213	A1	R546	E1	R635	C1
C135	B3	C535	E1	P303	B4	Q619	D1	R214	B1	R547	E1	R636	E2
C136	A4	C536	E1	P304	C4	R101	A3	R215	B1	R548	E2	R637	E1
C137	B4	C537	E3	P501	C3	R102	B3	R216	B1	R549	E1	R638	D2
C138	B4	C538	D1	P502	D2	R103	A3	R217	B1	R550	E1	R639	C2
C139	A4	C539	D1	P503	D3	R104	B3	R218	B1	R551	E1	R640	C2
C201	B2	C540	D1	P504	E3	R105	A3	R219	B2	R552	E1	R641	C2
C202	B2	C541	D2	P505	E1	R106	A3	R220	B2	R553	E1	R642	C2
C203	B2	C542	C4	P601	C1	R107	A3	R221	B2	R554	E1	R643	C2
C204	B1	C601	D1	P602	C1	R108	A3	R222	B2	R555	B4	R644	C2
C205	B1	C602	D1	P603	C1	R109	C3	R291	A1	R556	B4	R645	C2
C206	A1	C603	D3	PS01	B2	R110	A3	R292	A2	R557	E4	R646	D1
C207	B1	C604	D3	PT01	C4	R111	B3	R318	A3	R558	E4	R647	C2
C208	B1	C605	B1	PV01	B3	R112	B3	R501	E2	R559	E2	R648	C2
C209	B1	C606	B1	Q101	B3	R113	B3	R502	E2	R560	D1	R649	C2
C210	B1	C607	C2	Q102	A3	R114	B3	R503	E2	R561	D1	R650	C1
C211	B1	C608	B1	Q103	A4	R115	B4	R504	E2	R562	D3	R651	C1
C212	B1	C609	C1	Q104	A1	R116	B4	R505	E2	R563	D3	R652	D1
C213	B1	C610	D3	Q105	E1	R117	B4	R506	E2	R564	C1	R653	D3
C214	B2	C611	D3	Q105	A1	R118	A4	R507	E3	R591	E2	R666	C2
C215	B2	C613	C2	Q106	A2	R119	A2	R508	E3	R592	A3	R667	D1
C216	B2	C614	C2	Q107	B3	R120	B3	R509	E4	R593	E2	RF101	A2
C217	B2	C615	B1	Q108	B3	R121	B3	R510	E3	R594	E3	RF102	A4
C218	B2	C616	C1	Q109	B4	R122	A2	R511	E3	R595	E1	RF103	B3
C219	B2	D501	E1	Q110	B4	R123	A4	R512	E2	R601	D1	T201	B2
C220	B2	D502	E1	Q111	A4	R124	A3	R513	D3	R602	D1	TP191	A4
C221	B2	D503	E1	Q112	B2	R125	A3	R514	D3	R603	D4	TP102	A4
C501	E2	D504	E4	Q113	A1	R126	A3	R515	D3	R604	D3	TP193	B3
C502	E2	D601	D3	Q114	A2	R127	A1	R516	D3	R605	D1	TP201	A2
C503	E2	D602	C1	Q115	A3	R128	A1	R517	D3	R606	D2	TP202	A2
C504	E2	D603	B1	Q116	A2	R129	A2	R518	D3	R607	C2	TP203	A1
C505	E2	D604	C3	Q131	A4	R130	A1	R519	D4	R608	C1	TP396	A2
C506	E3	D605	C3	Q201	B2	R131	A4	R520	E4	R609	D1	TP502	E1
C507	E3	D606	C1	Q501	E2	R132	A4	R521	D4	R610	D2	X601	D2
C508	D3	D607	C3	Q502	D3	R133	A4	R522	D4	R611	D1		


S/N: 97P6534002-Axx

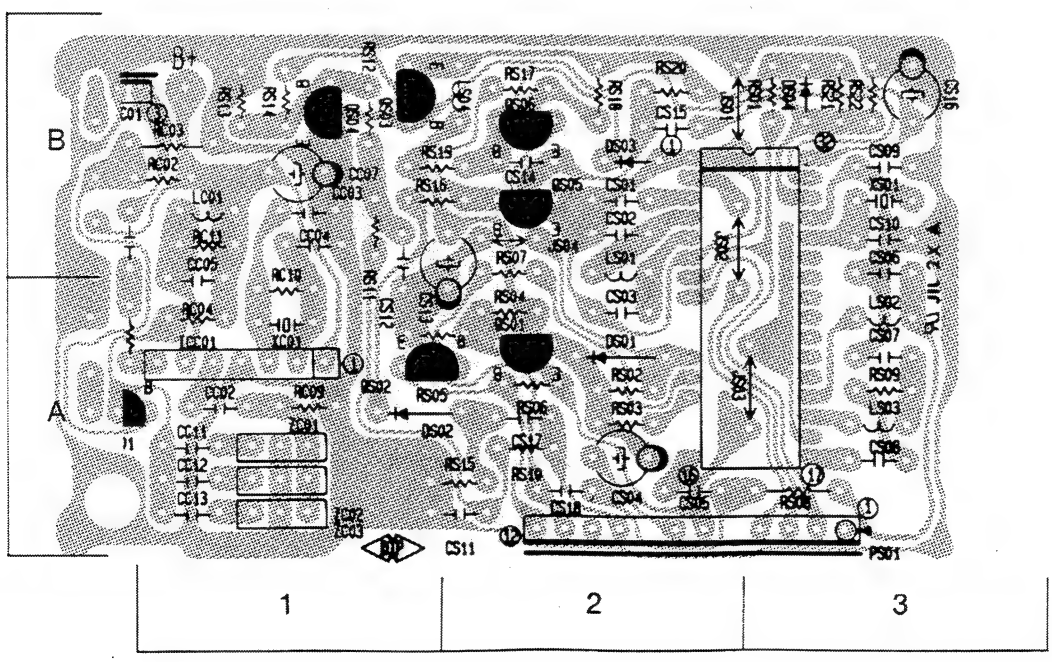
6-3. OSD AND SOUND CONVERTER PCB LOCATION-POSITION (DVR-6154D (KG) (DVR-6354D (KG)

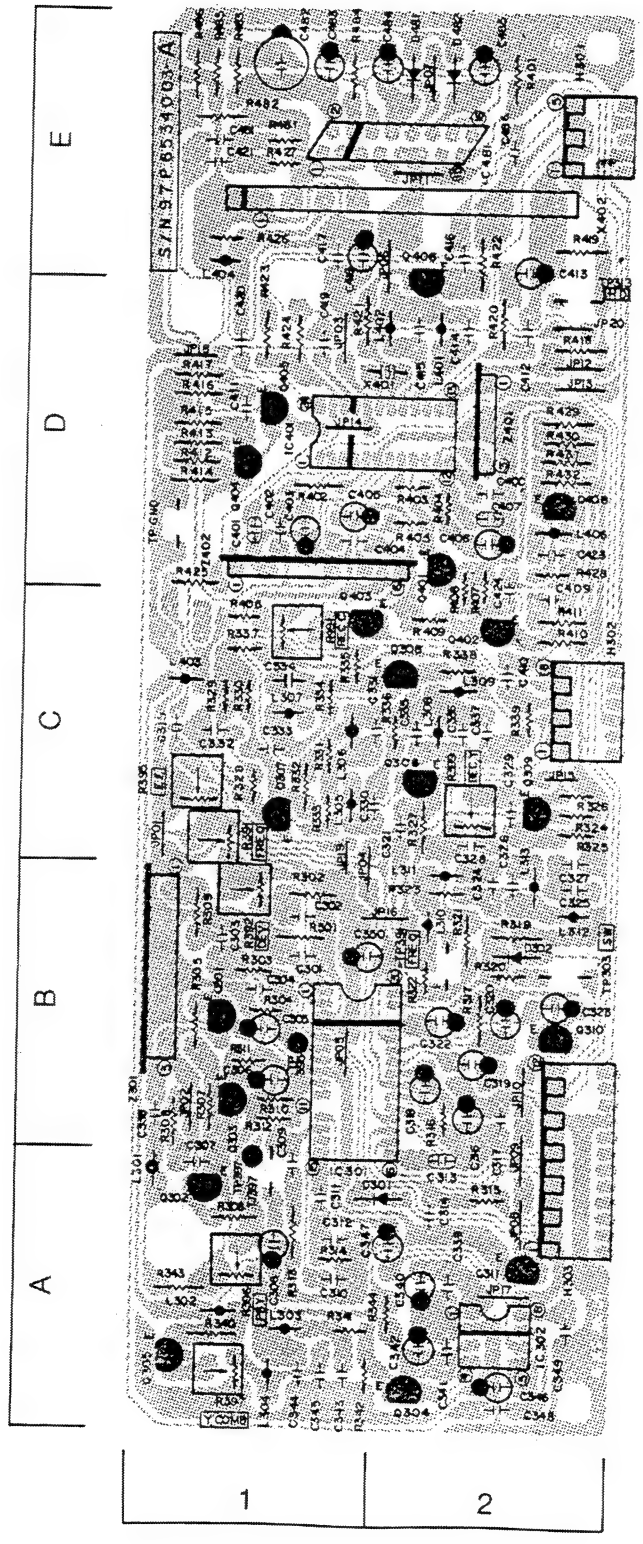
DSD

LCD	POS	LOC	POS	LOC	POS
CS01	B2	DS02	A2	RS05	A2
CS02	B2	DS03	B2	RS06	A2
CS03	A2	DS04	B3	RS07	B2
CS04	A2	ICS01	B3	RS08	A3
CS05	A3	LS01	B2	RS09	A3
CS06	B3	LS02	A3	RS10	A2
CS07	A3	LS03	A3	RS11	B2
CS08	A3	LS04	B2	RS12	B2
CS09	B3	PS01	A3	RS13	B1
CS10	B3	QS01	A2	RS14	B1
CS11	A2	QS02	A2	RS15	A2
CS12	B2	QS03	B2	RS16	B2
CS13	B2	QS04	B1	RS17	B2
CS14	B2	QS05	B2	RS18	B2
CS15	B3	QS06	B2	RS19	B2
CS16	B3	RS01	B3	RS20	B3
CS17	A2	RS02	A2	RS21	B3
CS18	A2	RS03	A2	RS22	B3
DS01	A2	RS04	A2	XS01	B3

SOUND CONVERTER

LOC	POS
CC01	B1
CC02	A1
CC03	B1
CC04	B1
CC05	B1
CC06	B1
CC07	B1
CC08	B1
CC11	A1
CC12	A1
HC01	B1
IC01	A1
LC01	B1
QC01	A1
RC02	B1
RC03	B1
RC04	A1
RC05	A1
RC09	A1
RC10	B1
RC11	B1
RC12	A1



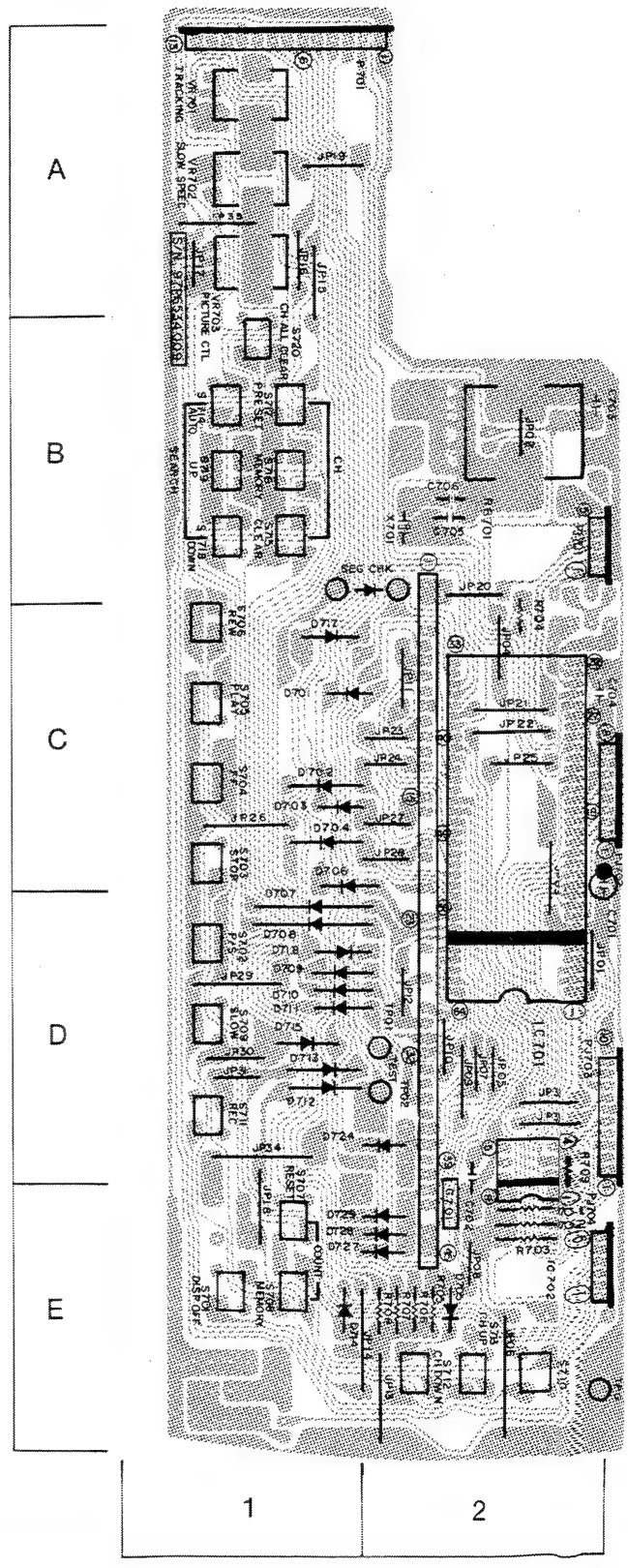

A
B
C
D
E
1
2

6-4. DVR-6154D/6158D VIDEO PCB LOCATION-POSITION

LOC	POS	LOC	POS	LOC	POS	LOC	POS	LOC	POS	LOC	POS	LOC	POS
C301	B1	C334	C1	C417	E1	L311	B2	R307	B1	R341	A1	R424	D1
C302	B1	C335	C2	C418	E1	L312	B2	R308	B1	R342	A1	R425	C1
C303	B1	C336	C2	C419	D1	L313	B2	R309	B1	R343	A1	R426	E1
C304	B1	C337	C2	C420	D1	L401	D2	R310	B1	R344	A2	R427	E1
C305	B1	C338	B1	C421	E1	L402	D2	R311	B1	R391	C1	R428	C2
C306	B1	C339	A2	C423	E2	L403	C1	R312	B1	R392	B1	R429	D2
C307	A1	C340	A2	C424	C2	L404	E1	R313	A1	R395	C1	R430	D2
C308	A1	C341	A2	C481	E1	L406	D2	R314	A1	R396	A1	R431	D2
C309	A1	C342	A2	C482	E1	Q301	B1	R315	A2	R397	A1	R432	D2
C310	A1	C343	A1	C483	E1	Q302	A1	R316	B2	R399	C2	R481	E1
C311	A1	C344	A1	C484	E1	Q303	B1	R317	B2	R401	E2	R482	E1
C312	A1	C345	A1	C485	E2	Q304	A2	R319	B2	R402	D1	R483	E1
C313	A2	C346	A2	D301	A2	Q305	A1	R320	B2	R403	D2	R484	E1
C314	A2	C347	A2	D302	B2	Q306	C2	R321	B2	R404	D2	R485	E1
C315	C1	C348	A2	D481	E2	Q307	C1	R322	B2	R405	D2	R486	E1
C316	B2	C349	A2	D482	E2	Q308	C2	R323	B2	R406	C1	R491	C1
C317	B2	C350	B1	H301	E2	Q309	C2	R324	C2	R407	C2	TJ397	A1
C318	B2	C401	D1	H302	C2	Q310	B2	R325	C2	R408	C2	TP GND	D1
C319	B2	C402	D1	H303	A2	Q311	A2	R326	C2	R409	C2	TP303	B2
C320	B2	C403	D1	IC301	B1	Q401	C2	R327	C2	R410	C2	TP313	D2
C321	C2	C404	D1	IC302	A2	Q402	C2	R328	C1	R411	C2	TP391	B2
C322	B2	C405	D1	IC401	D1	Q403	C1	R329	C1	R412	D1	TP395	B1
C323	B2	C406	D2	IC481	E1	Q404	D1	R330	C1	R413	D1	TP397	A1
C324	B2	C407	D2	L301	A1	Q405	D1	R331	C1	R414	D1	X401	D1
C325	B2	C408	D2	L302	A1	Q406	D2	R332	C1	R415	D1	X402	E1
C326	B2	C409	C2	L303	A1	Q407	D1	R333	C1	R416	D1	Z301	B1
C327	B2	C410	C2	L304	A1	Q408	D2	R334	C1	R417	D1	Z401	D2
C328	C2	C411	D1	L305	C1	R301	B1	R335	C1	R418	D2	Z402	C1
C329	C2	C412	D2	L306	C1	R302	B1	R336	C2	R419	E2		
C330	C1	C413	E2	L307	C1	R303	B1	R337	C1	R420	D2		
C331	C1	C414	D2	L308	C2	R304	B1	R338	C2	R421	D1		
C332	C1	C415	D2	L309	C2	R305	B1	R339	C2	R422	E2		
C333	C1	C416	E2	L310	B2	R306	A1	R340	A1	R423	D1		

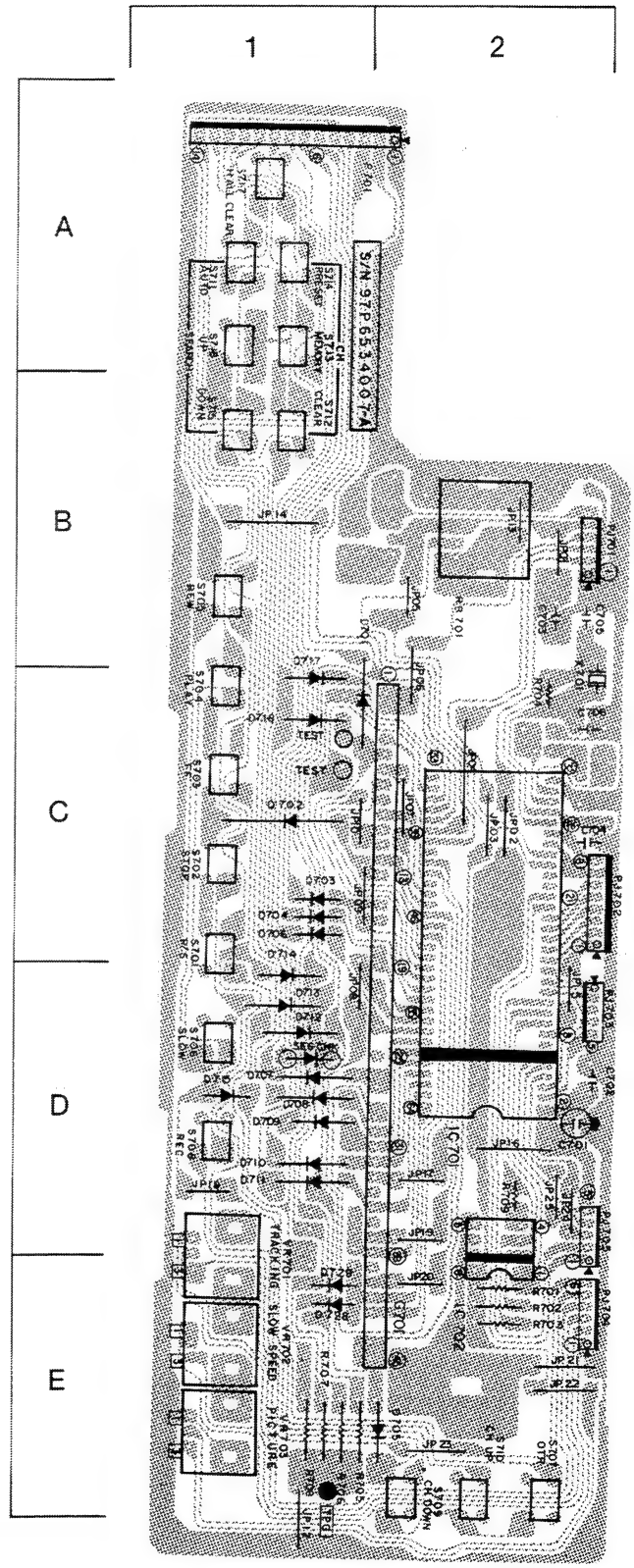
6-5. TIMER PCB LOCATION-POSITION (6158D, 6154D)

LOC	POS	LOC	POS	LOC	POS
C701	B1	D728	A2	S706	C2
C702	A1	D729	A2	S707	A2
C703	D1	G701	B1	S708	A2
C704	C1	IC701	C1	S709	B2
C705	D1	IC702	A2	S709	B2
C706	D1	P701	E2	S710	A1
D701	C2	PJ701	D1	S711	B2
D702	C2	PJ702	C1	S712	A1
D703	C2	PJ703	B1	S713	A1
D704	C2	PJ704	A1	S714	D2
D705	A1	R701	A1	S715	D2
D706	A1	R702	A1	S716	D2
D707	B2	R703	A1	S717	D2
D708	B2	R704	C1	S718	D2
D709	B2	R705	A1	S719	D2
D710	B2	R706	A1	S720	D2
D711	B2	R707	A1	TPG	A1
D712	B2	R708	A2	TP701	B2
D713	B2	R711	B1	TP702	B2
D714	A2	RB701	D1	VR701	E2
D715	B2	S701	A2	VR702	E2
D717	C2	S702	B2	VR703	E2
D718	B2	S703	C2	X701	D1
D724	B2	S704	C2		
D727	A2	S705	C2		



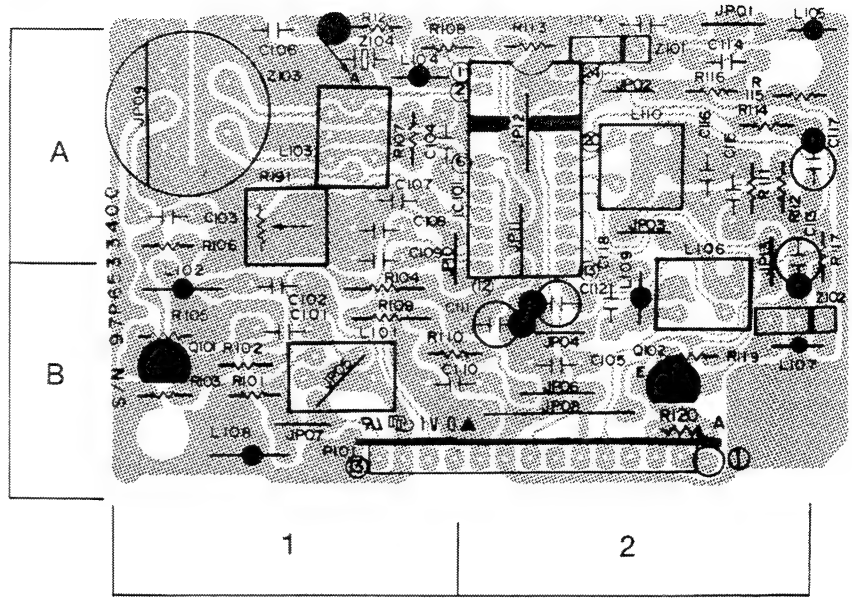
6-6. TIMER PCB LOCATION-POSITION (6358D, 6354D)

LOC	POS	LOC	POS
C701	B1	R702	A1
C702	B1	R703	A1
C703	D1	R704	C1
C704	C1	R705	A2
C705	D1	R706	A2
C706	C1	R707	A2
D701	C2	R708	A2
D702	C2	R711	B1
D703	C2	RB701	D1
D704	C2	S701	C2
D705	A2	S702	C2
D706	C2	S703	C2
D707	B2	S704	C2
D708	B2	S705	D2
D709	B2	S706	B2
D710	B2	S707	A1
D711	B2	S708	B2
D712	B2	S709	A1
D713	B2	S710	A1
D714	C2	S711	E2
D715	B2	S712	D2
D717	D2	S713	E2
D728	A2	S714	E2
D729	A2	S715	D2
G701	B2	S716	E2
IC701	C1	S717	E2
IC702	B1	TPG	A2
P701	E2	TEST	C2
PJ701	D1	VR701	B2
PJ702	C1	VR702	A2
PJ703	B1	VR703	A2
R701	A1	X701	D1



6-7. IF MODULE PCB LOCATION-POSITION

LOC	POS	LOC	POS
C101	B1	P101	B1
C102	B1	Q101	B1
C103	A1	Q102	B2
C104	A1	R101	B1
C105	B2	R102	B1
C106	A1	R103	B1
C107	A1	R104	B1
C108	A1	R105	B1
C109	A1	R106	A1
C110	B1	R107	A1
C111	B1	R108	A1
C112	B2	R109	B1
C113	A2	R110	B1
C114	A2	R111	A2
C115	A2	R112	A2
C116	A2	R113	A2
C117	A2	R114	A2
C118	B2	R115	A2
C119	A2	R116	A2
IC101	A1	R117	A2
L101	B1	R119	B2
L102	B1	R120	B2
L103	A1	R121	A1
L104	A1	R191	A1
L105	A2	Z101	A2
L106	B2	Z102	B2
L107	B2	Z103	A1
L109	B2	Z104	A1
L110	A2		



6-8. OSD AND VPS PCB LOCATION-POSITION (VPS: 6158D, 6358D ONLY)

OSD

LOC	POS	LOC	POS	LOC	POS
CS01	B2	DS02	A2	RS05	A2
CS02	B2	DS03	B2	RS06	A2
CS03	A2	DS04	B3	RS07	B2
CS04	A2	ICS01	B3	RS08	A3
CS05	A3	LS01	B2	RS09	A3
CS06	B3	LS02	A3	RS10	A2
CS07	A3	LS03	A3	RS11	B2
CS08	A3	LS04	B2	RS12	B2
CS09	B3	PS01	A3	RS13	B1
CS10	B3	QS01	A2	RS14	B1
CS11	A2	QS02	A2	RS15	A2
CS12	B2	QS03	B2	RS16	B2
CS13	B2	QS04	B1	RS17	B2
CS14	B2	QS05	B2	RS18	B2
CS15	B3	QS06	B2	RS19	B2
CS16	B3	RS01	B3	RS20	B3
CS17	A2	RS02	A2	RS21	B3
CS18	A2	RS03	A2	RS22	B3
DS01	A2	RS04	A2	XS01	B3

VPS

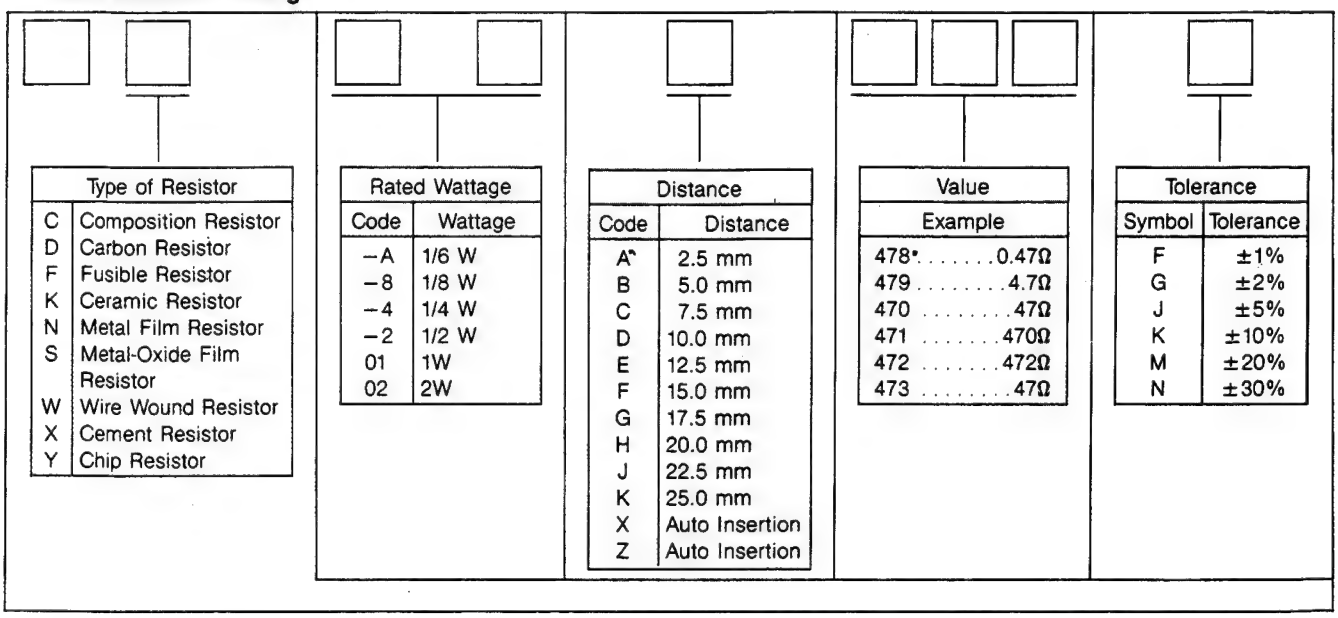
LOC	POS
CV01	A1
CV02	A1
CV03	A1
CV04	B1
CV05	A1
CV06	A1
CV07	B1
CV08	B1
ICV01	A1
LV01	B1
PV01	A1
RV01	A1
RV02	B1
RV03	B1
RV04	B1
RV05	A1

SECTION 8. ELECTRICAL PARTS LIST

7-1. STANDARD PART NUMBER CODING

7-1-1. RESISTOR CODING

1. Fixed Resistor Coding



Type of Resistor	
C	Composition Resistor
D	Carbon Resistor
F	Fusible Resistor
K	Ceramic Resistor
N	Metal Film Resistor
S	Metal-Oxide Film Resistor
W	Wire Wound Resistor
X	Cement Resistor
Y	Chip Resistor

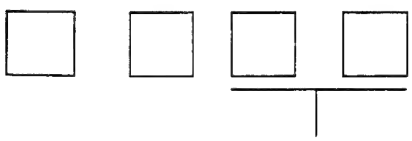
Rated Wattage	
Code	Wattage
−A	1/6 W
−8	1/8 W
−4	1/4 W
−2	1/2 W
01	1W
02	2W

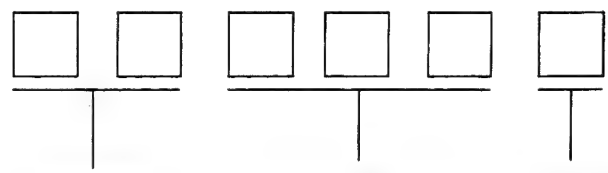
Distance	
Code	Distance
A	2.5 mm
B	5.0 mm
C	7.5 mm
D	10.0 mm
E	12.5 mm
F	15.0 mm
G	17.5 mm
H	20.0 mm
J	22.5 mm
K	25.0 mm
X	Auto Insertion
Z	Auto Insertion

Value
Example
478 . . . . . 0.47Ω
479 . . . . . 4.7Ω
470 . . . . . 47Ω
471 . . . . . 470Ω
472 . . . . . 472Ω
473 . . . . . 47Ω

Tolerance	
Symbol	Tolerance
F	±1%
G	±2%
J	±5%
K	±10%
M	±20%
N	±30%

2. Semi-Fixed Resistor Conding

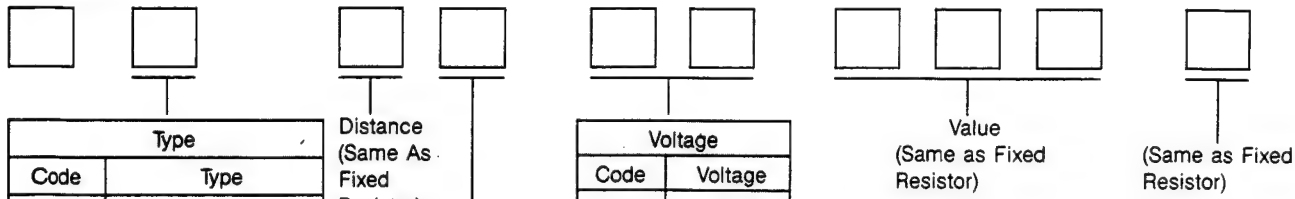




Meterial		Shape	Knob		Code
CARBON FILM	1	VERTICAL	WITH	1	11
			WITHOUT	2	12
		HORIZONTAL	WITH	3	13
			WITHOUT	4	14
METAL GRAZE	5	VERTICAL	WITH	1	21
			WITHOUT	2	22
		HORIZONTAL	WITH	3	23
			WITHOUT	4	24
CARBON SOLID	5	VERTICAL	WITH	1	51
			WITHOUT	2	52
		HORIZONTAL	WITH	3	53
			WITHOUT	4	54
CERMIET	6	VERTICAL	WITH	1	61
			WITHOUT	2	62
		HORIZONTAL	WITH	3	63
			WITHOUT	4	64

7-1-2. CAPACITOR CODING

1. Normal



Type	
Code	Type
A	Aluminum
B	Barrier Layer
C	Ceramic
E	Electrolytic
L	Line Across
M	Mylar
S	Styrol
N	Metalized Polyester
Q	Mica
	Oil
T	Tantal

Distance (Same As Fixed Resistor)

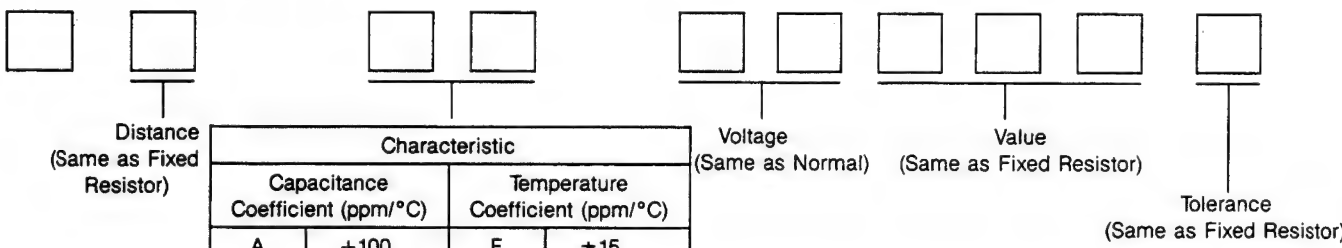
Shape or Characteristic

Voltage	
Code	Voltage
0J	6.3V
1A	10V
1C	16V
1D	20V
1E	25V
1V	35V
1G	40V
1H	50V
1J	63J
2A	100V
2B	125V
2C	160V
2D	200V
2E	250V
2F	315V

Value (Same as Fixed Resistor)

(Same as Fixed Resistor)

2. Temperature Compensation



Distance (Same as Fixed Resistor)

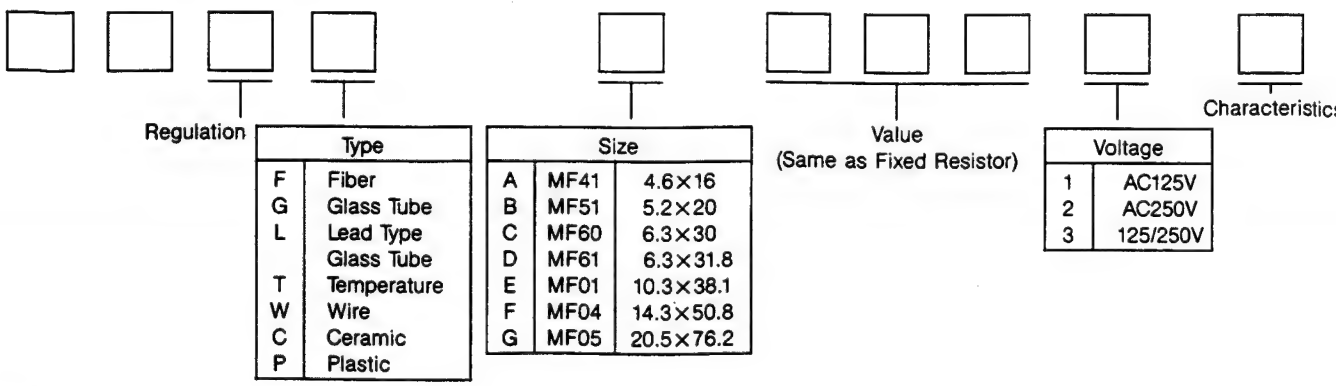
Characteristic			
Capacitance Coefficient (ppm/°C)		Temperature Coefficient (ppm/°C)	
A	+100	F	±15
B	+30	G	±30
C	0	H	±60
H	−30	J	±120
L	−80	K	±250
P	−150	L	±500
R	−220	M	±1000
S	−330	N	±2500
T	−470		
U	−750		
V	−1000		
SI	+350 ~ −1000		

Voltage (Same as Normal)

Value (Same as Fixed Resistor)

Tolerance (Same as Fixed Resistor)

7-1-3. FUSE CODING



Regulation

Type	
F	Fiber
G	Glass Tube
L	Lead Type Glass Tube
T	Temperature
W	Wire
C	Ceramic
P	Plastic

Size		
A	MF41	4.6×16
B	MF51	5.2×20
C	MF60	6.3×30
D	MF61	6.3×31.8
E	MF01	10.3×38.1
F	MF04	14.3×50.8
G	MF05	20.5×76.2

Value (Same as Fixed Resistor)

Voltage	
1	AC125V
2	AC250V
3	125/250V

Characteristics

7-2. ELECTRICAL PART LIST BY ASSEMBLIES

7-2-1. MAIN PCB ASS'Y (DVR-6158D, 6154D, 6358D, 6354D)

LOC	A/J	PART CODE	PART NAME	PART DESC
C101		CMXM1H432J	C MYLAR	50V 0.0043MF J
C102		CEXE1C470A	C ELECTRO	16V 47MF RS 6.3x11 TAPING
C103		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C104		CEXE1C470A	C ELECTRO	16V 47MF RS 6.3x11 TAPING
C105		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C106		CMXM1H104J	C MYLAR	50V 0.1MF J
C107		CMXM1H104J	C MYLAR	50V 0.1MF J
C108		CMXM1H104J	C MYLAR	50V 0.1MF J
C109		CEXE1C470A	C ELECTRO	16V 47MF RS 6.3x11 TAPING
C110		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C111		CXSL1H181J	C CERA	50V SL 180 PF J (TAPING)
C113		CEXE1H109A	C ELECTRO	50V 1MF RS 5x11 TAPING
C114		CEXE1H478A	C ELECTRO	50V 0.47MF RS 5x11 TAPING
C115		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C116		CEXE1C470A	C ELECTRO	16V 47MF RS6.3x11 TAPING
C117		CEXE1E100A	C ELECTRO	25V 10MF RS 5x11 TAPING
C118		CEXE1E100A	C ELECTRO	25V 10MF RS 5x11 TAPING
C119		CEXE0J471A	C ELECTRO	6.3V 470MF SM
C120		CEXE1V479A	C ELECTRO	35V 4.7MF RS 5x11 TAPING
C121		CEXE1H109A	C ELECTRO	50V 1MF RS 5x11 TAPING
C122		CEXE1H109A	C ELECTRO	50V 1MF RS 5x11 TAPING
C123		CEXE1H109A	C ELECTRO	50V 1MF RS 5x11 TAPING
C131		CEXE1H109A	C ELECTRO	50V 1MF RS 5x11 TAPING
C132		CMXM1H103J	C MYLAR	50V 0.01MF J
C133		CMXM1H103J	C MYLAR	50V 0.01MF J
C134		CMXL1H462J	C MYLAR (K/D)	50V 5600 PF (MEU) J
C135		CEXE1C330A	C ELECTRO	16V 33MF RS 5x11 TAPING
C136		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C137		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C138		CEXE1H109A	C ELECTRO	50V 1MF RS 5x11 TAPING
C139		CEXE1H109A	C ELECTRO	50V 1MF RS 5x11 TAPING
C201		CCXB1H152K	C CERA	HIKB 50V 1500PF K
C202		CCXB1h222K	C CERA	HIKB 50V 2200PF K
C204		CEXE1H109A	C ELECTRO	50V 1MF RS 5x11 TAPING
C205		CEXE1C330A	C ELECTRO	16V 33MF RS 5x11 TAPING
C206		CMXM1H103J	C MYLAR	50V 0.01MF J
C207		CEXE1H109A	C ELECTRO	50V 1MF RS 5x11 TAPING
C208		CEXE1C330A	C ELECTRO	16V 33MF RS 5x11 TAPING
C209		CMXM1H153K	MYLAR	50V 0.015MF K
C210		CEXE1V479A	C ELECTRO	35V 4.7MF RS 5x11 TAPING
C212		CMXM1H303J	C MYLAR	50V 0.03MF J
C213		CEXE1V479A	C ELECTRO	35V 4.7MF RS 5x11 TAPING
C214		CEXE1C330A	C ELECTRO	16V 33MF RS 5x11 TAPING
C215		CEXE1C330A	C ELECTRO	16V 33MF RS 5x11 TAPING

LOC	A/J	PART CODE	PART NAME	PART DESC
C216		CEXE1E100A	C ELECTRO	25V 10MF RS 5x11 TAPING
C217		CCXB2H221K	C CERA	HIKB 500V 220PF K
C218		CMXM1H473J	C MYLAY	50V 0.047MF J
C219		CCXB1H472K	C CERA	HIKB 50V 4700PF K
C220		CCXB1H472K	C CEREA	HIKb 50V 4700PF K
C221		CEXE1C470A	C ELECTRO	16V 47MF RS 6.3x11 TAPING
C501		CEXE1C470A	C ELECTRO	16V 47MF RS 6.3x11 TAPING
C502		CMXM1H463J	C MYLAR	50V 0.05MF J
C503		CMXM1H272J	C MYLAR	50V 2700PF J
C504		CMXM1H223J	C MYLAR	50V 0.022MF J
C505		CMXM1H223J	C MYLAR	50V 0.022MF J
C506		CEXE1E100A	C ELECTRO	25V 10MF RS 5x11 TAPING
C507		CEXE1E100A	C ELECTRO	25V 10MF RS 5x11 TAPING
C508		CEXE1E100A	C ELECTRO	25V 20MF RS 5x11 TAPING
C509		CEXE1V479A	C ELECTRO	35V 4.7MF RS 5x11 TAPING
C510		CEXE1C470A	C ELECTRO	16V 47MF RS 6.3x11 TAPING
C511		CMXM1H103J	C MYLAR	50V 0.01MF J
C512		CMXM1H183J	C MYLAR	50V 0.018MF J
C513		CMXM1H153J	C MYLAR	50V 0.015MF J TAPING
C514		CEXE1E100A	C ELECTRO	25V 10MF RS 5x11 TAPING
C515		CEXE1C220A	C ELECTRO	16V 22MF RS 5x11 TAPING
C516	X	CEXF1H104Z	C CERA	50V 0.1MF Z (TAPING)
C517		CEXE1C220A	C ELECTRO	16V 22MF RS 5x11 TAPING
C518		CEXE1C220A	C ELECTRO	16V 22MF RS 5x11 TAPING
C521		CEXE1C220A	C ELECTRO	16V 22MF RS 5x11 TAPING
C522		CMXM1H333J	C MYLAR	50V 0.03MF J
C523		CEXE1H339A	C ELECTRO	50V 3.3MF RS 5x11 TAPING
C524		CEXE1C330A	C ELECTRO	16V 33MF RS 5x11 TAPING
C525		CEXE1C330A	C ELECTRO	16V 33MF RS 5x11 TAPING
C526		CMXM1H822J	C MYLAR	50V 8200 PF J
C527		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C528		CEXE1H339A	C ELECTRO	50V 3.3MF RS 5x11 TAPING
C529		CMXM1H223J	C MYLAR	50V 0.022MF J
C530		CMXM1H473J	C MYLAR	50V 0.047MF J
C531		CMXM1H473J	C MYLAR	50V 0.047MF J
C532		CEXE1H109A	C ELECTRO	50V 1MF RS 5x11 TAPING
C533		CMXM1H333J	C MYLAR	50V 0.033MF J
C534		CMXM1H333J	C MYLAR	50V 0.033MF J
C535		CEXE1E100A	C ELECTRO	25V 10MF RS 5x11 TAPING
C536	X	CEXF1H104Z	C CERA	50V F 0.1MF Z (TAPING)
C537		CEXE1C470A	C ELECTRO	16V 47MF RS 6.3x11 TAPING
C538		CMXM1H333J	C MYLAR	50V 0.033MF J
C539		CMXM1H103J	C MYLAR	50V 0.01MF J
C540		CMXM1H223J	C MYLAR	50V 0.022MF J

LOC	A/J	PART CODE	PART NAME	PART DESC
C541		CEXE1V479A	C ELECTRO	35V 4.7MF RS 5x11 TAPING
C542	X	CBXF1H104Z	C CERA	50V F 0.1 MF Z (TAPING)
C545		CCXB1H122K	C CERA	HIKB 50V 1200 PF K
C546		CMXM1H472J	C MYLAR	50V 0.047MF J
C601		CEXE1C470A	C ELECTRO	16V 47MF RS6.3x11 TAPING
C602		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C603	X	CBXF1H104Z	C CERA	50V F 0.1 MF Z (TAPING)
C604		CEXE1C470A	C ELECTRO	16V 47MF RS 6.3x11 TAPING
C610		CXCH1H300J	C CERA	50V CH 30 PF J TAPING
C611		CXCH1H300J	C CERA	50V CH 30 PF J TAPING
C613		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C614		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C616		CEXE1C470A	C ELECTRO	16V 47MF RS 6.3x11 TAPING
D501		DZN4148--	DIODE	1N4148 AUTO 52MM
D502		DZN4148--	DIODE	1N4148 AUTO 52MM
D503		DZN4148--	DIODE	1N4148 AUTO 52MM
D601		DZN4148--	DIODE	1N4148 AUTO 52MM
D604		DNZ4148--	DIODE	1N4148 AUTO 52MM
D605		DZN4148--	DIODE	1N4148 AUTO 52MM
D607		DZN4148--	DIODE	1N4148 AUTO 52MM
D608		DZN4148--	DIODE	1N4148 AUTO 52MM
D611		DZN4148--	DIODE	1N4148 AUTO 52MM
IC102		1AN5421--	IC	AN5421
IC201		1LA7295--	IC	LA7295
IC501		1DTS03NPA1	IC	DTS03NPA1 (TD6374N-A1)
IC502		1DBL324--	IC	DBL324
IC503		1DBL324--	IC	DBL324
IC504		1BA867--	IC	BA867
IC601		1DMB3521SY	IC	DMB3521SY (M40742-124SP)
IC602		1TA7288P-	IC	TA7288P
JW00A		WP-1RD1418	WIRE LEAD (UNINFLMBL)	AWG22 1/0.65 RD 10-140-10
JW00B		WP-1RD1418	WIRE LEAD (UNIFNLMBL)	AWG22 1/0.65 RD 10-140-10
JW00D		WP-1GN1018	WIRE LEAD (UNIFNLMBL)	AWG22 1/0.65 GN 10-100-10
JW00F		WP-1RD8008	WIRE LEAD (UNINFLMBL)	AWG22 1/0.65 RD 10-80-10
J101		97P6302900	JACK PHONE	JPJ-1018-01-020 (RD)
J102		97P6302900	JACK PHONE	JPJ-1018-01-020 (RD)
J103		97P5303000	JACK PHONE	JPJ-1018-01-040 (YW)
J104		97P6303000	JACK PHONE	JPJ-1018-01-040 (YW)
L201		56Z103J336	COIL PEAKING	EL0607RA-103J (AUTO)
L202		56Z471J203	COIL PEAKING	EL0606RA-470UH J (ATUO)
PT01		97P6262900	CONN WAFER	YMW-025-04 2.5MM
P101		97P6269400	CONN WAFER	00-8283-1012-00000
P201		97P6268900	CONN WAFER	00-8283-0512-00000
P202	00000	97P6268600	CONN WAFER	00-8283-0212

LOC	A/J	PART CODE	PART NAME	PART DESC
P301		97P6277600	CONN WAFER	B/S II STR. 5P
P302		97P6277610	CONN WAFER	B/S II STR. 6P
P303		97P6277670	CONN WAFER	B/S II STR, 12P
P304		97P6269300	CONN WAFER	00-8283-0912-0000
P501		97P6263800	CONN WAFER	YMW-025-13 2.5MM
P502		97P6269200	CONN WAFER	00-8283-0812-00000
P503		97P6268600	CONN WAFER	00-8283-0212-00000
P504		97P6269100	CONN WAFER	00-8283-0712-00000
P505		97P6269000	CONN WAFER	00-8283-0612-00000
P601		97P6269200	CONN WAFER	00-8283-0812-00000
P602		97P8800118	CONN AS 52DA (Y0118)	DECK-MAIN FLAT WIRE 13P
P603		97P8800117	CONN AS 52DA (Y0117)	F/L-MAIN FLAT WIRE 10P
Q101		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q102		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q104		TZRC1202--	TR	KRC1202 (AUTO)
Q105		TZRC1202--	TR	KRC1202 (AUTO)
Q106		TZRC1202--	TR	KRC1202 (AUTO)
Q107		TZTK30AGR-	FET	KTK30A-GR (AUTO)
Q109		TKTA966Y--	TR	KTA966-Y
Q110		TZRC1202--	TR	KRC1202 (AUTO)
Q112		TZRC1201--	TR	KRC1201 (AUTO)
Q113		TZRC1201--	TR	KRC1201 (AUTO)
Q114		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q115		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q116		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q131		TKTA1015Y-	TR	KTA1015-Y
Q201		TZTC1959Y-	TR	KTC1959-Y (AUTO)
Q501		TZTA1015Y-	TR	KTA1015-Y (AUTO)
Q502		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q503		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q504		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q505		TZRC1204--	TR	KRC1204 (AUTO)
Q506		TZTA1015Y-	TR	KTA1015-A (AUTO)
Q507		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q508		TZRC1204--	TR	KRC 1204 (AUTO)
Q601		TZRD1204--	TR	KRC1204 (AUTO)
Q602		TZTA1015Y-	TR	KTA1015-Y (AUTO)
Q603		TZRC1204--	TR	KRC1204 (AUTO)
Q604		TZTA1015Y-	TR	KTA1015-Y (AUTO)
Q605		TZRC1202--	TR	KRC1202 (AUTO)
Q611		TZRA2202--	TR	KRA2202 (AUTO)
Q612		TZRC1204--	TR	KRC1204 (AUTO)
Q613		TZRC1204--	TR	KRC1204 (AUTO)
Q614		TZRC1204--	TR	KRC1204 (AUTO)
Q617		TZRC1204--	TR	KRC1204 (AUTO)
Q618		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q619		TZRC1204--	TR	KRC1204 (AUTO)

LOC	A/J	PART CODE	PART NAME	PART DESC
RF101		4859705930	TUNER VARACTOR	VTSA1SZ3 (A3KG1SZ3A)
RF102		97P7204200	MODULATOR RF	MCB9-UG3601
R101		RD-AZ122J-	R CARBON FILM	1/6 1.2K OHM J
R102		RD-AZ363J-	R CARBON FILM	1/6 36K OHM J
R103		RD-AZ223J-	R CARBON FILM	1/6 22K OHM J
R104		RD-AZ114J-	R CARBON FILM	1/6 110K OHM J
R105		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R106		RD-AZ303J-	R CARBON FILM	1/6 30K OHM J
R107		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R108		RD-AZ303J-	R CARBON FILM	1/6 30K OHM J
R109		RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
R110		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R111		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R112		RD-AZ272J-	R CARBON FILM	1/6 2.7K OHM J
R113		RD-AZ105J-	R CARBON FILM	1/6 1M OHM J
R115		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R116		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R119		RD-AZ122J-	R CARBON FILM	1/6 1.2K OHM J
R120		RD-AZ202J-	R CARBON FILM	1/6 2K OHM J
R122		RD-AZ680J-	R CARBON FILM	1/6 68 OHM J
R123		RD-AZ162J-	R CARBON FILM	1/6 1.6K OHM J
R124		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R125		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R126		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R127		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R128		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R129		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R130		RD-AZ822J-	R CARBON FILM	1/6 8.2K OHM J RK01
R131		RD-AZ563J-	R CARBON FILM	1/6 56K OHM J
R132		RD-AZ273J-	R CARBON FILM	1/6 27K OHM J
R133		RD-AZ182J-	R CARBON FILM	1/6 1.8K OHM J RK03
R134		RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
R135		RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
R136		RD-AZ822J-	R CARBON FILM	1/6 8.2K OHM J RK01
R137		RD-AZ393J-	R CARBON FILM	1/6 39K OHM J
R138		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R139		RD-AZ822J-	R CARBON FILM	1/6 8.2K OHM J RK01
R140		RD-AZ332J-	R CARBON FILM	1/6 3.3K OHM J RK02
R141		RD-AZ393J-	R CARBON FILM	1/6 39K OHM J
R142		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R143		RD-AZ682J-	R CARBON FILM	1/6 6.8K OHM J
R193		RV5417222E	R SEMI FIXED	RH-0615C 2.2KB H-TYPE
R201		RD-AZ100J-	R CARBON FILM	1/6 10 OHM J
R202		RD-AZ333J-	R CARBON FILM	1/6 33K OHM J
R204		RD-AZ271J-	R CARBON FILM	1/6 270 OHM J
R205		RD-AZ334J-	R CARBON FILM	1/6 330K OHM J
R206		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J

LOC	A/J	PART CODE	PART NAME	PART DESC
R207		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R208		RD-AZ183J-	R CARBON FILM	1/6 18K OHM J
R209		RD-AZ223J-	R CARBON FILM	1/6 22K OHM J
R210		RD-AZ101J-	R CARBON FILM	1/6 100 OHM J
R211		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R212		RD-AZ513J-	R CARBON FILM	1/6 51K OHM J
R213		RD-AZ242J-	R CARBON FILM	1/6 2.4K OHM J
R214		RD-AZ163J-	R CARBON FILM	1/6 16K OHM J
R215		RD-AZ302J-	R CARBON FILM	1/6 3K OHM J
R217		RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
R218		RD-AZ183J-	R CARBON FILM	1/6 18K OHM J
R219		RD-AZ333J-	R CARBON FILM	1/6 33K OHM J
R220		RD-AZ303J-	R CARBON FILM	1/6 30K OHM J
R221		RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
R222		RD-AZ519J-	R CARBON FILM	1/6 5.1 OHM J
R291		RV5417103M	R SEMI FIXED	10K OHM B H-TYPE
R292		RV5417104M	R SEMI FIXED	100K OHM B H-TYPE
R318		RD-AZ750J-	R CARBON FILM	1/6 75 OHM J
R501		RD-AZ471J-	R CARBON FILM	1/6 470 OHM J
R503		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R504		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R505		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R506		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R507		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R508		RD-AZ560J-	R CARBON FILM	1/6 56 OHM J
R509		RD-AZ304J-	R CARBON FILM	1/6 300K OHM J
R510		RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
R511		RD-AZ394J-	R CARBON FILM	1/6 390K OHM J
R512		RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
R513		RD-AZ303J-	R CARBON FILM	1/6 30K OHM J
R514		RD-AZ432J-	R CARBON FILM	1/6 4.3K OHM J
R515		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R516		RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J RK04
R517		RD-AZ471J-	R CARBON FILM	1/6 470 OHM J
R518		RD-AZ471J-	R CARBON FILM	1/6 470 OHM J
R519		RD-AZ824J-	R CARBON FILM	1/6 820K OHM J
R520		RD-AZ204J-	R CARBON FILM	1/6 150K OHM J
R521		RD-AZ204J-	R CARBON FILM	1/6 200K OHM J
R522		RD-AZ302J-	R CARBON FILM	1/6 200 OHM J
R523		RD-AZ302J-	R CARBON FILM	1/6 3K OHM J
R524		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R525		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R526		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R527		RD-AZ623J-	R CARBON FILM	1/6 62K OHM J
R528		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R529		RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
R530		RD-AZ202J-	R CARBON FILM	1/6 2K OHM J

LOC	A/J	PART CODE	PART NAME	PART DESC
R531		RD-AZ243J-	R CARBON FILM	1/6 24K OHM J
R532		RD-AZ242J-	R CARBON FILM	1/6 2.4K OHM J
R533		RD-AZ304J-	R CARBON FILM	1/6 300K OHM J
R534		RD-AZ122J-	R CARBON FILM	1/6 1.2K OHM J
R535		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R536		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R537		RD-AZ623J-	R CARBON FILM	1/6 62K OHM J
R538		RD-AZ912J-	R CARBON FILM	1/6 9.1K OHM J
R539		RD-AZ225J-	R CARBON FILM	1/6 2.2M OHM J
R540		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R541		RD-AZ564J-	R CARBON FILM	1/6 560K OHM J
R542		RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
R543		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R544		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R545		RD-AZ225J-	R CARBON FILM	1/6 2.2M OHM J
R546		RD-AZ164J-	R CARBON FILM	1/6 160K OHM J
R547		rD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R548		RD-AZ754J-	R CARBON FILM	1/6 750K OHM J
R549		RD-AZ564J-	R CARBON FILM	1/6 560K OHM J
R550		RD-AZ304J-	R CARBON FILM	1/6 130K OHM J
R551		RD-AZ304J-	R CARBON FILM	1/6 300K OHM J
R552		RD-AZ624J-	R CARBON FILM	1/6 620K OHM J
R554		RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
R555		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R556		RD-AZ472J	R CARBON FILM	1/6 4.7K OHM J
R557		RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J RK04
R558		RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
R559		RD-AZ225J-	R CARBON FILM	1/6 2.2M OHM J
R560		RD-AZ154J-	R CARBON FILM	1/6 150K OHM J
R562		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R563		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R591		RV5417504M	R SEMI FIXED	500K OHM B H-TYPE
R592		RV5217204M	R SEMI FIXED	200K OHM B V-TYPE
R593		RV5417104M	R SEMI FIXED	100K OHM B H-TYPE
R594		RV5417104M	R SEMI FIXED	500K OHM B H-TYPE
R595		RV5417504M	R SEMI FIXED	500K OHM B H-TYPE
R601		RD-AZ103J-	R CARBON FILM	1/6 10K OHMJ
R602		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R603		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R604		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R605		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R606		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R607		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R608		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R609		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R610		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R611		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J

LOC	A/J	PART CODE	PART NAME	PART DESC
R612		RD-AZ822J-	R CARBON FILM	1/6 8.2K OHM J
R613		RD-AZ201J-	R CARBON FILM	1/6 200K OHM J
R614		RD-AZ201J-	R CARBON FILM	1/6 200 OHM J
R615		RD-AZ201J-	R CARBON FILM	1/6 200 OHM J
R616		RD-AZ291J-	R CARBON FILM	1/6 200 OHM J
R617		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R618		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R624		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R625		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R626		RD-AZ105J-	R CARBON FILM	1/6 1M OHM J
R627		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R629		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R634		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R635		RD-aZ103J-	R CARBON FILM	1/6 10K OHM J
R636		RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R637		RD-AZ302J-	R CARBON FILM	1/6 3K OHM J
R638		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R644		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R646		RD-AZ513J-	R CARBON FILM	1/6 51K OHM J
R647		RD-AZ202J-	R CARBON FILM	1/6 2K OHM J
R648		RD-AZ432J-	R CARBON FILM	1/6 4.3K OHM J
R649		RS02Y399J-	R M-OXIDE FILM	2W 3.9 OHM J
R650		RD-AZ471J-	R CARBON FILM	1/6 470 OHM J
R651		RD-AZ103J-	R CARBON FILM	1/6 470 OHM J
R652		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R653		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R654		RA-85X472J	R ARRAY	1/8 4.7K OHM J DRB472J 5P
R666		RD-AZ512J-	R CARBON FILM	1/6 5.1K OHM J
R667		RD-AZ274J-	R ACRBON FILM	1/6 270K OHM J
TP191		97P6400300	PIN TEST	BSW D1.0×8.5L SN-3
TP192		97P6400300	PIN TEST	BSW D1.0×8.5L SN-3
TP193		97P6400300	PIN TEST	BSW D1.0×8.5L SN-3
TP201		97P6400300	PIN TEST	BSW D1.0×8.5L SN-3
TP202		97P6400300	PIN TEST	BSW D1.0×8.5L SN-3
TP203		85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
TP396		85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
TP501		97P6400300	PIN TEST	BSW D1.0×8.5L SN-3
TP502		97P6400300	PIN TEST	BSW D1.0×8.5L SN-3
T201		5604020001	COIL BIAS OSC	DEO-004
U501		97P6534002	PCB MAIN (DVR-4153D)	317×164×1.6T
X601		97P0A00200	RESONATOR CERA	FCR 4.0M2
Y1100		97P8801100	CONN AS 6131P (Y1100)	LUG AS (POWER-MAIN)
ZM01		97P0701800	BOARD ANTENNA	HI-PS (HB) VCR-63DAP

7-2-2. VIDEO PCB ASS'Y (DVR-6158D, 6154D, 6358D, 6354D)

LOC	A/J	PART CODE	PART NAME	PART DESC
C301		CXSL1H509C	C CERA	50V SL 5PF C (TAPING)
C302		CXSL1H391J	C CERA	50V SL 390PF J (TAPING)
C303		CXSL1H330J	C CERA	50V SL 33PF J (TAPING)
C304		CXSL1H150J	C CERA	SL 50V 15PF J TAPING
C305		CEXE1H478A	C ELECTRO	50V 0.47MF RS 5X11 TAPING
C306		CEXE1H229A	C ELECTRO	50V 2.2MF RS 5X11 TAPING
C307		CXSL1H201J	C CERA	SL 50V 200PF J R/T
C308		CEXE1H229A	C ELECTRO	50V 2.2MF RS 5X11 TAPING
C309		CXSL1H330J	C CERA	50V SL 33PF J (TAPING)
C310		CXSL1H910J	C CERA	SL 50V 91PF J
C311		CXSL1H560J	C CERA 5 M/M	50V SL 56PF J TAPING
C312	X	CXSL1H100J	C CERA	SL 50V 10PF J TAPING
C313		CMXM1H683J	C MYLAR	50V 0.068MF J
C314		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C315		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C316		CEXE1C470A	C CERA	16V 47MF RS6.3X11 TAPING
C317		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C318		CEXE1H229A	C ELECTRO	50V 2.2MF 5X11 TAPING
C319		CEXE1V479A	C ELECTRO	35V 4.7MF RS 5X11 TAPING
C320		CEXE1H220A	C ELECTRO	50V 2.2MF RS 5X11 TAPING
C321		CCXF1H103Z	C CERA	50V F 0.01MF Z TAPING
C322		CEXE1H478A	C ELECTRO	50V 0.47MF RS 5X11 TAPING
C323		CEXE1E100A	C ELECTRO	25V 10MF RS 5X11 TAPING
C324		CXSL1H150J	C CERA	SL 50V 15PF J TAPING
C325		CX5L1H161J	C CERA	50V SL 160PF J (TAPING)
C326		CXSL1H161J	C CERA	50V SL 160PF J (TAPING)
C327		CXSL1H750J	C CERA	SL 50V 75PF J
C328		CXSL1H360J	C CERA	SL 50V 36PF J
C329		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C330		CXSL1H331J	C CERA	50V SL 330PF J (TAPING)
C331		CXSL1H509C	C CERA	50V SL 5PF C (TAPING)
C332		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C333		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C334		CXSL1H330J	C CERA	50V SL 33PF Z (TAPING)
C335		CCXF1H103Z	C CERA	50V SL F 0.01MF Z (TAPING)
C336		CXSL1H309C	C CERA	50V SL 3PF C (TAPING)
C337		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C338		CXSL1H220J	C CERA	50V SL 22PF J (TAPING)
C339		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C340		CEXE1E100A	C ELECTRO	25V 10MF RS 5X11 TAPING
C341		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C342		CEXE1E100A	C ELECTRO	25V 10MF RS 5X11 TAPING
C343		CXCH1H240J	C ELECTRO	50V CH 24PF J (TAPING)
C344		CXCH1H820J	C CERA	50V CH 82PF J (TAPING)
C345		CXCH1H240J	C CERA	50V CH 24PF J (TAPING)

LOC	A/J	PART CODE	PART NAME	PART DESC
C346		CEXE1V479A	C ELECTRO	35V 4.7MF RS 5X11 TAPING
C347		CEXE1H338A	C ELECTRO	50V 0.33MF RSX11 TAPING
C348		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C349		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C350		CEXE1C470A	C ELECTRO	16V 47MF RS6.3X11 TAPING
C401		CMXM1H223K	C MYLAR	50V 0.022MF K
C402		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C403		CEXE1H109A	C ELECTRO	50V 1MF RS 5X11 TAPING
C404		CXSL1H101J	C CERA	50V SL 100PF J (TAPING)
C405		CEXE1H109A	C ELECTRO	50V 1MF RS 5X11 TAPING
C406		CEXE1H109A	C ELECTRO	50V 1MF RS 5X11 TAPING
C407		CMXM1H223K	C MYLAR	50V 0.022MF K
C408		CCXF1Hd473Z	C CERA	50V F 0.047MF Z (TAPING)
C409		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C410		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C411		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C412		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C413		CEXE1H109A	C ELECTRO	50V 1MF RS 5X11 TAPING
C414		CXCH1H430J	C CERA	50V CH 43PF J (TAPING)
C415		CXSL1H330J	C CERA	50V SL 33PF J (TAPING)
C416		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C417		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C418		CEXE1C470A	C ELECTRO	16V 47MF RS6.3X11 TAPING
C419		CXSL1H101J	C CERA	50V SL 100 PF J (TAPING)
C420		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C421		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C423		CXSL1H470J	C CERA	50V SL 47PF J (TAPING)
C424		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C481		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C482		CEXE1C221A	C ELECTRO	16V 220MF RS 10X12.5
C483		CEXE1E100A	C ELECTRO	25V 10MF RS 5X11 TAPING
C484		CEXE1H109A	C ELECTRO	50V 1MF RS 5X11 TAPING
C485		CEXE1H109A	C ELECTRO	50V 1MF RS 5X11 TAPING
C486		CESL1H910J	C CERA	SL 50V 91PF J
D301		DZN4148--	DIODE	1N4148 AUTO 52MM
D302		DZN4148--	DIODE	1N4148 AUTO 52MM
D481		DZN4148--	DIODE	1N4148 AUTO 52MM
D482		DZN4148--	DIODE	1N4148 AUTO 52MM
H301		97P6277430	CONN HOUSING	76281-405
H302		97P6277440	CONN HOUSING	76281-406
H303		97P6277500	CONN HOUSING	76281-412
IC301		1LA7323--	IC	LA7323 Y-PROCESS
IC302		1MSM69653R	IC	MSM6965-3RS (1H CCD PAL)
IC401		1LA7331N-	IC	LA7331N COLOR PROCESS
IC481		1LA7311-	IC	LA7311 (SECAM DETEC)

LOC	A/J	PART CODE	PART NAME	PART DESC
L301		56Z151J202	COIL PEAKING	EL0606RA-150UH J (AUTO)
L302		56Z101J205	COIL PEAKING	EL0606RA-150UH J (AUTO)
L303		56Z680J199	COIL PEAKING	EL0606RA-150UH J (AUTO)
L304		56Z680J199	COIL PEAKING	EL0606RA-150UH J (AUTO)
L305		56Z181J209	COIL PEAKING	EL0606RA-150UH J (AUTO)
L306		56Z220J201	COIL PEAKING	EL0606RA-150UH J (AUTO)
L307		56Z560J208	COIL PEAKING	EL0606RA-150UH J (AUTO)
L308		56Z330J432	COIL PEAKING	EL0606RA-150UH J (AUTO)
L309		56Z270J431	COIL PEAKING	EL0606RA-150UH J (AUTO)
L310		56Z330J432	COIL PEAKING	EL0606RA-150UH J (AUTO)
L311		56Z330J432	COIL PEAKING	EL0606RA-150UH J (AUTO)
L312		56Z820J212	COIL PEAKING	EL0606RA-82 J (AUTO)
L313		56Z271J436	COIL PEAKING	EL0606RA-270UH J (AUTO)
L401		56Z180J430	COIL PEAKING	EL0606RA-10UH J (AUTO)
L402		56Z479K426	COIL PEAKING	EL0606RA-4.7UH K (AUTO)
L403		56Z101J205	COIL PEAKING	EL0606RA-1000UH J (AUTO)
L404		56Z150J198	COIL PEAKING	EL0606RA-15UH J (AUTO)
L406		56Z470J206	COIL PEAKING	EL0606RA-47J (AUTO)
Q301		TZTA1015Y-	TR	KTA1015-Y (AUTO)
Q302		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q303		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q304		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q305		TZTA1015Y-	TR	KTA1015-Y (AUTO)
Q306		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q307		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q308		TZTA1015Y-	TR	KTA1015-Y (AUTO)
Q309		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q310		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q311		TZRC1204--	TR	KTC1204 (AUTO)
Q401		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q402		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q403		TZTA1015Y-	TR	KTA1015-Y (AUTO)
Q404		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q405		TZTC1815Y-	TR	KTC1815-Y (AUTO)
Q406		TZTC1815-	TR	KTC1815-Y (AUTO)
Q408		TZTC1815Y-	TR	KTC1815-Y (AUTO)
R301		RD-AZ272J-	R CARBON FILM	1/6 2.7K OHM J
R302		RD-AZ681J-	R CARBON FILM	1/6 680 OHM J
R303		RD-AZ332J-	R CARBON FILM	1/6 3.3K OHM J RK02
R304		RD-AZ105J-	R CARBON FILM	1/6 1M OHM J
R305		RD-AZ302J-	R CARBON FILM	1/6 3K OHM J
R306		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R307		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R308		RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J RK04
R309		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R310		RD-AZ105J-	R CARBON FILM	1/6 1M OHM J
R311		RD-AZ202J-	R CARBON FILM	1/6 2K OHM J

LOC	A/J	PART CODE	PART NAME	PART DESC
R312		RD-AZ105J-	R CARBON FILM	1/6 1M OHM J
R313		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R314		RD-AZ682J-	R CARBON FILM	1/6 6.8K OHM J
R315		RD-AZ333J-	R CARBON FILM	1/6 33K OHM J
R316		RD-AZ154J-	R CARBON FILM	1/6 150K OHM J
R317		RD-AZ154J-	R CARBON FILM	1/6 150K OHM J
R319		RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
R320		RD-AZ303J-	R CARBON FILM	1/6 30K OHM J
R321		RD-AZ202J-	R CARBON FILM	1/6 2K OHM J
R322		RD-AZ181J-	R CARBON FILM	1/6 180 OHM J
R323		RD-AZ911J-	R CARBON FILM	1/6 910 OHM J
R324		RD-AZ333J-	R CARBON FILM	1/6 33K OHM J
R325		RD-AZ333J-	R CARBON FILM	1/6 33K OHM J
R326		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R327		RD-AZ122J-	R CARBON FILM	1/6 1.2K OHM J
R328		RD-AZ391J-	R CARBON FILM	1/6 390 OHM J
R329		RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
R330		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R331		RD-AZ302J-	R CARBON FILM	1/6 3K OHM J
R332		RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J
R333		RD-AZ911J-	R CARBON FILM	1/6 910 OHM J
R334		RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J RK04
R335		RD-AZ391J-	R CARBON FILM	1/6 390 OHM J
R336		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R337		RD-AZ391J-	R CARBON FILM	1/6 390 OHM J
R338		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R339		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R340		RD-AZ202J-	R CARBON FILM	1/6 2K OHM J
R341		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R342		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R343		RD-AZ512J-	R CARBON FILM	1/6 5.1K OHM J
R344		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R391		RV5417203M	R SEMI FIXED	20K OHM B H-TYPE
R392		RV5417103M	R SEMI FIXED	10K OHM B H-TYPE
R395		RV5417103M	R SEMI FIXED	10K OHM B H-TYPE
R396		RV5417302M	R SEMI FIXED	3K OHM B H-TYPE
R397		RV5417102M	R SEMI FIXED	1K OHM B H-TYPE
R399		RV5417102M	R SEMI FIXED	1K OHM B H-TYPE
R401		RD-AZ563J-	R CARBON FILM	1/6 56K OHM J
R402		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R403		RD-AZ223J-	R CARBON FILM	1/6 22K OHM J
R404		RD-AZ122J-	R CARBON FILM	1/6 1.2K OHM J
R405		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R406		RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R407		RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J
R408		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R409		RD-AZ123J-	R CARBON FILM	1/6 12K OHM J

LOC	A/J	PART CODE	PART NAME	PART DESC
R410		RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J
R411		RD-AZ181J-	R CARBON FILM	1/6 180 OHM J
R412		RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R413		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R414		RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J RK04
R415		RD-AZ391J-	R CARBON FILM	1/6 390 OHM J
R416		RD-AZ121J-	R CARBON FILM	1/6 120 OHM J
R417		RD-AZ751J-	R CARBON FILM	1/6 750 OHM J
R418		RD-AZ223J-	R CARBON FILM	1/6 22K OHM J
R419		RD-AZ122J-	R CARBON FILM	1/6 1.2K OHM J
R420		RD-AZ822J-	R CARBON FILM	1/6 8.2K OHM J
R421		RD-AZ182J-	R CARBON FILM	1/6 1.8K OHM J
R422		RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J RK04
R424		RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
R425		RD-AZ911J-	R CARBON FILM	1/6 910 OHM J
R426		RD-AZ122J-	R CARBON FILM	1/6 1.2K OHM J
R427		RD-AZ271J-	R CARBON FILM	1/6 270 OHM J
R428		RD-AZ122J-	R CARBON FILM	1/6 1.2K OHM J
R429		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R430		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R431		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R432		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J

LOC	A/J	PART CODE	PART NAME	PART DESC.
R481		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R482		RD-AZ105J-	R CARBON FILM	1/6 1M OHM J
R483		RD-AZ183J-	R CARBON FILM	1/6 18K OHM J
R484		RD-AZ821J-	R CARBON FILM	1/6 820 OHM J
R485		RD-AZ223J-	R CARBON FILM	1/6 22K OHM J
R486		RD-AZ224J-	R CARBON FILM	1/6 22K OHM J
R491		RV5417102M	R SEMI FIXED	1K OHM B H-TYPE
TJ397		85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
TPGND		85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
TP303		85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
TP313		85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
TP391		85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
TP395		97P6400300	PIN TEST	BSW D1.0x8.5L SN-3
TP397		97P6400300	PIN TEST	BSW D1.0x8.5L SN-3
U301		97P6534003	PCB VIDEO (UNION 1)	247x197x1.6T/2
X401		5PA4R43361	CRYSTAL	4.433619 MHZ (15PPM)
X402		97P7002400	DELAY LINE	2H COMB ADL-FE1846E
Z301		5PDLP1005-	FILTER LC	DLP1005 3.0 MHZ
Z401		5PDB1007B	FILTER LC	DBP1007B 5.06 MHZ
Z402		5PDBLP1006	FILTER LC	DBLP1006 4.43 MHZ, 1.6 MHZ.

7-2-3. PRE-AMP PCB AS (DVR-6158D, 6154D, 6358D, 6354D)

LOC	A/J	PART CODE	PART NAME	PART DESC
CA02		CEXE1C470A	C ELECTRO	16V 47MF RS6.3x11 TAPING
CA03		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
CA04		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
CA05		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
CA06		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
CA07		CCXF1h223Z	C CERA	50V F 0.022MF Z (TAPING)
CA08		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
CA09		CEXE1C470A	C ELECTRO	16V 47MF RS6.3x11 TAPING
CA10		CCXF1H223Z	C CERA	50V F 0.022MF Z (TAPING)
CA11		CEXE1H109A	C ELECTRO	50V 1MF 5x11 TAPING
CA12		CCXF1H223Z	C CERA	50V F 0.022MF Z (TAPING)
CA13		CCXF1H473Z	C CERA	50V F 0.047MF Z (TAPING)
CA14		CXCH1H560J	C CERA	50V CH 56PF J (TAPING)
CA15		CCXF1H473Z	C CERA	50V F 0.04MF Z (TAPING)
CA16		CXCH1H560J	C CERA	50V CH 56PF Z (TAPING)
CA17		CCXF1H223Z	C CERA	50V F 0.022MF Z (TAPING)

LOC	A/J	PART CODE	PART NAME	PART DESC
H306		97P6273500	CONN DIP	IL-D-4S-S3LA2-A DIP TYPE
ICA01		1LA7320---	IC	LA7320 REC PRE AMP
LA01		56Z101J205	COIL PEAKING	EL0606RA-100UH J (AUTO)
LA02		56Z101J205	COIL PEAKING	EL0606RA-100UH J (AUGO)
P305		97P6253100	CONN WAFER	GIL-S-9P-S2L2-EF
RA01		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
RA02		RD-AZ181J-	R CARBON FILM	1/6 180 OHM J
RA03		RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
RA04		RD-AZ519J-	R CARBON FILM	1/6 5.1 OHM J
TP399		97P6400300	PIN TEST	BSW D1.0x8.5L SN-3
TP400		97P6400300	PIN TEST	BSW D1.0x8.5L SN-3
U302		97P6534005	PCB UNION-3	PRE-AMP 197x163x1.6T/9
ZV01		97P0429100	CASE PREAMP	ET TO.3
ZV02		97P0429000	COVER PREAMP	ET TO.3
ZV03		7601300811	SCREW MACHINE	PIN 3x8 PW MFZN

7-2-4. POWER PCB ASS'Y (DVR-6158D, 6154D, 6358D, 6354D)

LOC	A/J	PART CODE	PART NAME	PART DESC
C801		CLYL2E104M	C LINE ACROSS	250V 0.1MF M S.D.V.
C802		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)

LOC	A/J	PART CODE	PART NAME	PART DESC
C803		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C804		CEYE1V332A	C ELECTRO	35V 3300MF RS

LOC	A/J	PART CODE	PART NAME	PART DESC
C805		CEXE1H470A	C ELECTRO	50V 47MF RS 8x11.5 TAPING
C806		CEXE2A101A	C ELECTRO	100V 100MF RS 13x20
C807		CEXE2A470A	C ELECTRO	100V 47MF RS
C808		CEXE1C332A	C ELECTRO	16V 3300MF 16x35.5
C809		CEXE1H109A	C ELECTRO	50V 1MF RS 5x11 TAPING
C810		CEXE1H100A	C ELECTRO	50V 10MF RS 5x11 TAPING
C811		CEXE1C101A	C ELECTRO	16V 100MF RS 8x11 TAPING
C813		CEXE1E220A	C ELECTRO	25V 22MF RS 5x11 TAPING
C814		CEXE1C220A	C ELECTRO	16V 22MF RS 5x11 TAPING
C815		CEXE1H479A	C ELECTRO	50V 4.7MF RS 5x11 TAPING
C816		CEXE1C220A	C ELECTRO	16V 22MF RS 5x11 TAPING
C819		CEXE1C470A	C ELECTRO	16V 47MF RS6.3x11 TAPING
D801		DD3SBA20--	DIODE BRIDGE	D3SB(A)20
D805		D1N4003---	DIODE	1N4003
D806		D1N4003---	DIODE	1N4003
D807		DUZ6R8BM--	DIODE ZENER	UZ 6.8B 500MW SILICON
D808		DUZ22BL---	DIODE ZENER	UZ-22BL
D809		DZN4148---	DIODE	1N4148 AUTO 52MM
D810		D1N4003---	DIODE	1N4003
D812		DMA105R1L-	DIODE ZENER	MA 1051L (5R1)
D814		1UPC574J--	IC	UPC574J
D815		DZN4148---	DIODE	1N4148 AUTO 52MM
D816		D1N4003---	DIODE	1N4003
F0230		97P6900830	CORD POWER AS	KKP-419C+5SP3-1/2HTO.2
O001		4859901111	CORD POWER	KKP-419C KLCE-2F (2.1ME)
O002		4857416500	TERM MALE W/MTD	BSP3-1/2H TO.2 SN-3
F801		5FSGB3112L	FUSE	SEMKO 0.315A 250V TL
F801A		9762350100	CLIP FUSE	SHF-003 D5.2x20MM F TYPE
F802		5FSGB1222L	FUSE	SEMKO MF51 1.25A 250A TL
F802A		9762350100	CLIP FUSE	SHF-003 D5.2x20MM F TYPE
F803		5FSGB122L	FUSE	SEMKO MF51 1.25A 250V TL
F803A		9762350100	CLIP FUSE	SHF-003 D5.2x20MM F TYPE
IC801		1DBL324---	IC	DBL324
L801		5PLF302---	FILTER LINE	LF-302-801
P802		97P6268900	CONN WAFER	00-8283-0512-00000
Q801		T2SD2058Y-	TR	2SD2058Y-
Q802		T2SD2058Y-	TR	2SD2058Y-

LOC	A/J	PART CODE	PART NAME	PART DESC
Q803		T2SD2058Y-	TR	2SD2058Y-
Q804		T2SD2058Y-	TR	2SD2058Y-
Q805		TZTC2229Y-	TR	KTC2229-Y (AUTO)
Q806		TZRC1204--	TR	KRC1204 (AUTO)
Q808		TZTC2236Y-	TR	KTC2236-Y (AUTO)
Q809		TZTC1959Y-	TR	KTC1959-Y (AUTO)
R802		RF-2Y220J-	R FUSIBLE	1/2 22 OHM J
R803		RD-4Z471J-	R CARBON FILM	1/4 470 OHM J
R804		RS01Y152J-	R M-OXIDE FILM	1W 1.5K OHM J
R805		RD-4Z472J-	R CARBON FILM	1/4 4.7K OHM J
R806		RD-4Z203J-	R CARBON FILM	1/4 20K OHM J
R807		RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
R808		RD-4Z562J-	R CARBON FILM1	1/4 5.6K OHM J
R809		RS01Y332J-	R M-OXIDE FILM	1W 3.3K OHM J
R811		RD-4Z182G-	R CARBON FILM	1/4 1.8K OHM G
R812		RD-4Z132G-	R CARBON FILM	1/4 1.3K OHM G
R813		RD-4Z132G-	R CARBON FILM	1/4 1.3K OHM G
R814		RD-4Z182G-	R CARBON FILM	1/4 1.8K OHM G
R816		RD-4Z104J-	R CARBON FILM	1/4 100K OHM J
R817		RD-4Z203J-	R CARBON FILM	1/4 20K OHM J
R818		RD-4Z333J-	R CARBON FILM	1/4 33K OHM J
R819		RD-4Z623J-	R CARBON FILM	1/4 62K OHM J
R820		RD-4Z104J-	R CARBON FILM	1/4 100K OHM J
R822		RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
R823		RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
R824		RD-4Z511J-	R CARBON FILM	1/4 510 OHM J
T801		57PV060078	TRANS POWER	TPW-4153D 220V 50Hz VDE
U801		97P6534004	PCB POWER (UNION 2)	218x242x1.6T/3
Y2601		97P8802601	CONN AS 4153D (Y2601)	POWER-MAIN (13P-3P)
ZP01		97P2421600	BRKT POWER	SECC T1.0 (DVR-60ON)
ZP02		97P4403400	HEAT SINK TR	AL
ZP03		97P2316600	HOLDER AC CORD	NYLON 66 (VCR-63DA) BLK
ZP04		7624301211	SCREW TAPPING	T2S RND 3x12 PW MFZN
ZP05		7124401211	SCREW TAPPING	T2S RND 4x12 MFZN
ZP06		7624300811	SCREW TAPPING	T2S RND 3x8 PW MFZN

7-2-5. TIMER PCB ASS'Y (DVR-6158D, 6154D, 6358D, 6354D

LOC	A/J	PART CODE	PART NAME	PART DESC
C701		CEXF1A470A	C ELECTRO	10V 47MF RSM 6.2x7 TAPING
C702		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C703		CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPING)
C705		CXCH1H809D	C CERA	50V CH 8PF D (TAPING)
C706		CXCH1H809D	C CERA	50V CH 8PF D (TAPING)

LOC	A/J	PART CODE	PART NAME	PART DESC
D701		CZN4148---	DIODE	1N4148 AUTO 52MM
D702		CZN4148---	DIODE	1N4148 AUTO 52MM
D703		CZN4148---	DIODE	1N4148 AUTO 52MM
D704		CZN4148---	DIODE	1N4148 AUTO 52MM
D705		CZN4148---	DIODE	1N4148 AUTO 52MM

LOC	A/J	PART CODE	PART NAME	PART DESC
D706		CZN4148---	DIODE	1N4148 AUTO 52MM
D707		CZN4148---	DIODE	1N4148 AUTO 52MM
D708		CZN4148---	DIODE	1N4148 AUTO 52MM
D709		CZN4148---	DIODE	1N4148 AUTO 52MM
D710		CZN4148---	DIODE	1N4148 AUTO 52MM
D711		CZN4148---	DIODE	1N4148 AUTO 52MM
D712		CZN4148---	DIODE	1N4148 AUTO 52MM
D713		CZN4148---	DIODE	1N4148 AUTO 52MM
D714		CZN4148---	DIODE	1N4148 AUTO 52MM
D715		CZN4148---	DIODE	1N4148 AUTO 52MM
D717		CZN4148---	DIODE	1N4148 AUTO 52MM
D718		CZN4148---	DIODE	1N4148 AUTO 52MM
G701		DCPF2362GR	DIGITRON	CPF2362GR (PAL)
IC701		1DMB3520VV	IC (TIMER)	DMB3520VV (M50959-171SP)
IC702		1ER5911---	IC EEPROM	ER5911
M701		97P2318600	HOLDER DIGITRON-R	ABS-780
RB701		1DHR38----	IC UNIT R/RECEIVER	DHR38 (FO=38KHz) PREAMP
R701		RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
R702		RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
R703		RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
R704		RD-AZ105J-	R CARBON FILM	1/6 1M OHM J
R705		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R706		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R707		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R708		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R709		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
S701		5S40101166	SW TACT	KHH-10906-A 1C-1P

LOC	A/J	PART CODE	PART NAME	PART DESC
S702		5S40101166	SW TACT	KHH-10906-A 1C-1P
S703		5S40101166	SW TACT	KHH-10906-A 1C-1P
S704		5S40101166	SW TACT	KHH-10906-A 1C-1P
S705		5S40101166	SW TACT	KHH-10906-A 1C-1P
S706		5S40101166	SW TACT	KHH-10906-A 1C-1P
S707		5S40101166	SW TACT	KHH-10906-A 1C-1P
S708		5S40101166	SW TACT	KHH-10906-A 1C-1P
S709		5S40101166	SW TACT	KHH-10906-A 1C-1P
S710		5S40101166	SW TACT	KHH-10906-A 1C-1P
S711		5S40101166	SW TACT	KHH-10906-A 1C-1P
S712		5S40101166	SW TACT	KHH-10906-A 1C-1P
S713		5S40101166	SW TACT	KHH-10906-A 1C-1P
S714		5S40101166	SW TACT	KHH-10906-A 1C-1P
S715		5S40101166	SW TACT	KHH-10906-A 1C-1P
S716		5S40101166	SW TACT	KHH-10906-A 1C-1P
S717		5S40101166	SW TACT	KHH-10906-A 1C-1P
S718		5S40101166	SW TACT	KHH-10906-A 1C-1P
TPG		97P6400300	PIN TEST	BSW D1.0x8.5L SN-3
TP01		97P6400300	PIN TEST	BSW D1.0x8.5L SN-3
TP02		97P6400300	PIN TEST	BSW D1.0x8.5L SN-3
VR701		5V1504004B	VR ROTARY	RK09K1130-500K OHM B C.C
VR702		5V1504004B	VR ROTARY	RK09K1130-500K OHM B C.C
VR703		5V1504004B	VR ROTARY	RK09K1130-500K OHM B C.C
X701		5PHC18U419	CRYSTAL	HC-18/U 4, 194304MHz
Y1102		97P8801102	CONN AS 63DAP (Y1102)	POWER-TIMER (5P-5P)
Y2605		97P8802605	CONN AS4153D (Y2605)	TMR-SYSCON (8P-8P)

LOC	PART CODE	PART NAME	PART DESC	OPTIONAL MODEL NUMBER
S719	5S40101166	SW TACT	KHH-10906-A 1C-1P	DVR-6158D, 6154D
S720	5S40101166	SW TACT	KHH-10906-A 1C-1P	DVR-6158D, 6154D
SL12	5S40101166	SW TACT	KHH-10906-A 1C-1P	DVR-6158D, 6154D OSD
SL15	5S40101166	SW TACT	KHH-10906-A 1C-1P	DVR-6158D, 6154D OSD
D724	DZN4148---	DIODZ	1N4148	VPS
SL10	5S40101166	SW TACT	KHH-10906-A 1C-1P	DRV-6158D, 6154D VPS
SL14	5S40101166	SW TACT	KHH-10906-A 1C-1P	DVR-6158D, 6154D VPS
D727	DZN4148---	DIODE	1N 4148	LCD
U701	97P6534009	PCB TIMER	247x197x1.6T/2	DVR-6158D, 6358D
	97P6534007	PCB TIMER	247x197x1.6T/2	DVR-6358D, 6354D
UL01	97P6534010	LOGIC SW PCB	158x82x1.6T/2	DVR-6158D, 6154D
	97P6534008	LOGIC SW PCB	158x82x1.6T/2	DVR-6358D, 6354D
PL01	97P6249100	CONN WAFER	5530-13A	DVR-6158D, 6154D
	97P6249200	CONN WAFER	5530-14A	DVR-6358D, 6354D
P701	97P6247700	CONN HOUSING	5244-13AHPB	DVR-6158D, 6154D
	97P6247800	CONN HOUSING	5244-14AHPB	DRV-6358D, 6354D

7-2-6. LOGIC SW PCB ASS'Y (DVR-6158D, 6154D, 6358D, 6354D)

LOC	A/J	PART CODE	PART NAME	PART DESC
DL01		DDL1LRN---	LED	DL-1LRN
DL02		DZN4148---	DIODE	1N4148 AUTO 52MM
DL03		DZN4148---	DIODE	1N4148 AUTO 52MM
ML01		97P2315000	HOLDER LED	ABS-780/HF-380
RL01		RD-AZ271J-	R CARBON FILM	1/6 270 OHM J
SL01		5S30203055	SW SLIDE	KSA-2340D
SL02		5S40101166	SW TACT	KHH-10906-A 1C-1P
SL03		5S40101166	SW TACT	KHH-10906-A 1C-1P
SL04		5S40101166	SW TACT	KHH-10906-A 1C-1P

LOC	A/J	PART CODE	PART NAME	PART DESC
SL05		5S40101166	SW TACT	KHH-10906-A 1C-1P
SL06		5S40101166	SW TACT	KHH-10906-A 1C-1P
SL07		5S40101166	SW TACT	KHH-10906-A 1C-1P
SL08		5S40101166	SW TACT	KHH-10906-A 1C-1P
SL09		5S40101166	SW TACT	KHH-10906-A 1C-1P
SL10		5S40101166	SW TACT	KHH-10906-A 1C-1P
SL11		5S40101166	SW TACT	KHH-10906-A 1C-1P
SL12		5S40101166	SW TACT	KHH-10906-A 1C-1P

7-2-7. OSD PCB AS

LOC	A/J	PART CODE	PART NAME	PART DESC
A01		97P2419000	BRKT JUMPER A	VCR-63DB
CS01		CCXF1H473Z	C CERA	50V F 0.047MF Z (TAPING)
CS02		CXSL1H200J	C CERA	50V SL 20 PF J (TAPING)
CS03		CXSL1H200J	C CERA	50V SL 20 PF J (TAPING)
CS04		CEXE1C470A	C ELECTRO	16V 47MF RS6.3x11 TAPING
CS05		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
CS06		CXSL1H200J	C CERA	50V SL 20 PF J (TAPING)
CS07		CXSL1H430J	C CERA	50V SL 43 PF J (TAPING)
CS08		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
CS09		CXCH1H270J	C CERA	50V CH 27 PF J (TAPING)
CS10		CXCH1H270J	C CERA	50V CH 27 PF J (TAPING)
CS11		CCXB1H472K	C CERA	HIKB 50V 4700PF K
CS12		CCXB1H472K	C CERA	HIKB 50V 4700PF K
CS13		CEXE1C470A	C ELECTRO	16V 47MF RS6.3x11 TAPING
CS14		CMXM1H102K	C MYLAR	50V 1000PF K
CS15		CCXB1H331K	C CERA	HIKB 50V 330 PF K
CS16		CEXE1C470A	C ELECTRO	16V 47MF RS6.3x11 TAPING
CS17		CCXB1H102K	C CERA	HIKB 50V 1000 PF K
CS18		CXSL1H201J	C CERA	SL 50V 200PF J R/T
CS19		CXSL1H101J	C CERA	50V SL 100 PF J (TAPING)
DS01		DZN4148---	DIODE	1N4148 AUTO 52MM
DS02		DZN4148---	DIODE	1N4148 AUTO 52MM
DS03		DZN4148---	DIODE	1N4148 AUTO 52MM
DS04		DZN4148---	DIODE	1N4148 AUTO 52MM
ICS01		1M50455001	IC	M50455-001 OSD IC
LS01		56Z150J198	COIL PEAKING	EL0606RA-15UH J (AUTO)
LS02		56Z270J431	COIL PEAKING	EL0606RA-27UH J (AUTO)
LS03		56Z270J431	COIL PEAKING	EL0606RA-27UH J (AUTO)
LS04		56Z270J431	COIL PEAKING	EL0606RA-27UH J (AUTO)
PS01		97P6284700	CONN WAFER	YFAW-025-12 FLAT ANGLE
QS01		TZTC1815Y-	TR	KTC1815-Y (AUTO)

LOC	A/J	PART CODE	PART NAME	PART DESC
S02		TZTC1815Y-	TR	KTC1815-Y (AUTO)
QS03		TZTC1815Y-	TR	KTC1815-Y (AUTO)
QS04		TZTC1815Y-	TR	KTC1815-Y (AUTO)
QS05		TZTC1815Y-	TR	KTC1815-Y (AUTO)
QS06		TZTC1815Y-	TR	KTC1815-Y (AUTO)
RS01		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
RS02		RD-AZ101J-	R CARBON FILM	1/6 10K OHM J
RS03		RD-AZ101J-	R CARBON FILM	1/6 100 OHM J
RS04		RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
RS05		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
RS06		RD-AZ181J-	R CARBON FILM	1/6 180 OHM J
RS07		RD-AZ101J-	R CARBON FILM	1/6 100 OHM J
RS08		RD-AZ242J-	R CARBON FILM	1/6 2.4K OHM J
RS09		RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
RS10		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
RS11		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
RS12		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
RS13		RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
RS14		RD-AZ224J-	R CARBON FILM	1/6 220K OHM J
RS15		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
RS16		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
RS17		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
RS18		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
RS19		RD-AZ204J-	R CARBON FILM	1/6 200K OHM J
RS20		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
RS21		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
RS22		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
US01		97P6534006	PCB OSD & VPS (U-6)	197x197x1.6T
XS01		5PHC18U17R	CRYSTAL	HC-18/U 17.734 76MHz

7-2-8. OSD & VPS PCB ASS'Y (DVR-6158D, 6358D) OSD PCB ASS'Y IS THE SAME WITH 7-2 PART

LOC	A/J	PART CODE	PART NAME	PART DESC
CV01		CCXB1H102K	C CERA	HIKB 50V 1000 PF K
CV02		CCXB1H471K	C CERA	HIKB 50V 470PF K
CV03		CCXB1H472K	C CERA	HIKB 50V 4700PF K
CV04		CBXF1H104Z	C CERA	50V F 0.1 MF Z (TAPING)
CV05		CMXM1H223K	C MYLAR	50V 0.022MF K
CV06		CCXB1H472K	C CERA	HIKB 50V 4700PF K
CV07		CBXF1F104Z	C CERA	50V F 0.1MF Z (TAPING)
CV08		CEXE1C470A	C ELECTRO	16V 47MF RS6.3x11 TAPING

LOC	A/J	PART CODE	PART NAME	PART DESC
ICV01		1SAA4700--	IC	SAA4700 VPS IC
LV01		56Z101J205	COIL PEAKING	EL0606RA-100UH J(AUTO)
PV01		97P6283900	CONN WAFER	YFAW 025-04 FLAT ANGLE
RV01		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
RV02		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
RV03		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
RV04		RD-AZ753J-	R CARBON FILM	1/6 75K OHM J
RV05		RD-AZ822J-	R CARBON FILM	1/6 8.2K OHM J PK01

7-2-9. IF MODULE PCB ASS'Y (DVR-6158D, 6154D, 6358D, 6354D)

LOC	A/J	PART CODE	PART NAME	PART DESC
A009		97PA136700	PCB IF MODULE AS	DVR-4153D
BP01		97P2419000	BRKT JUMPR A	VCR-63DB
C101		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C102		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C103		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C104		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C105		CMXM1H103J	C MYLAR	50V F 0.01 MF J
C106		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C107		CCXB1H102K	C CERA	HIKB 50V 1000 PF K
C108		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C109		CEXE1H228A	C ELECTRO	50V 0.22MF RS 5x11 TAPING
C110		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C111		CEXE1C470A	C ELECTRO	16V 47MF RS6.3x11 TAPING
C112		CEXE1H108A	C ELECTRO	50V 0.1MF RS 5x11 TAPING
C113		CEXE1H229A	C ELECTRO	50V 2.2MF RS 5x11 TAPING
C114		CXSL1H330J	C CERA	50V SL 33 PF J (TAPING)
C115		CCXB1H102K	C CERA	HIKB 50V 1000 PF K
C116		CCXF1H103Z	C CERA	50V F 0.01 MF Z (TAPING)
C117		CEXE1H478A	C ELECTRO	50V 0.47MF RS 5x11 TAPING
C118		CXCH1H200J	C CERA	50A CH 20 PF J (TAPING)
C119		CXSL1H330J	C CERA	50V SL 33 PF J (TAPING)
IC101		1LA7555---	IC	LA7555
L101		56R828J626	COIL TRAP	TRF-1336 32.4 MHz TRAP
L102		56C109K628	COIL CHOKE	TRF-3810 0.95 UH
L103		56C139K627	COIL CHOKE	TRF-3813 1.3 UH CAN
L104		56Z220J201	COIL PEAKING	EL0606RA-22UH J (AUTO)
L105		56Z150J198	COIL PEAKING	EL0606RA-15UH J (AUTO)
L106		56E688J624	COIL AFT	TRF-3882 (38.9 MHz)
L107		56Z150J198	COIL PEAKING	EL0606RA-15UH J (AUTO)
L109		56Z399K425	COIL PEAKING	EL0606RA-3.9UH K (AUTO)
L110		560208J625	COIL VCO	TRF-3824 (38.9 MHz)

LOC	A/J	PART CODE	PART NAME	PART DESC
P101		97P6284800	CONN WAFER	YFAW-025-13 FLAT ANGLE
Q101		TZTC388A--	TR	KTC388A TM FA (AUTO)
Q102		TZTC1815Y-	TR	KTC1815-Y (AUTO)
R101		RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
R102		RD-AZ132J-	R CARBON FILM	1/6 1.3K OHM J
R103		RD-AZ331J-	R CARBON FILM	1/6 330 OHM J
R104		RD-AZ361J-	R CARBON FILM	1/6 360 OHM J
R105		RD-AZ270J-	R CARBON FILM	1/6 27 OHM J
R106		RD-AZ471J-	R CARBON FILM	1/6 470 OHM J
R107		RD-AZ132J-	R CARBON FILM	1/6 1.3K OHM J
R108		RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J
R109		RD-AZ203J-	R CARBON FILM	1/6 20K OHM J
R110		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R111		RD-AZ124J-	R CARBON FILM	1/6 120K OHM J
R112		RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
R113		RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
R114		RD-AZ470J-	R CARBON FILM	1/6 47 OHM J
R115		RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J
R116		RD-AZ621J-	R CARBON FILM	1/6 620 OHM J
R117		RD-AZ271J-	R CARBON FILM	1/6 270 OHM J
R119		RD-AZ471J-	R CARBON FILM	1/6 470 OHM J
R120		RD-AZ680J-	R CARBON FILM	1/6 68 OHM J
R121		RD-AZ821J-	R CARBON FILM	1/6 820 OHM J
R191		RV5417203M	R SEMI FIXED	20K OHM B H-TYPE
UP001		97P6533400	PCB IF MODULE UNIO	IF MODULE 247x121x1.6T
Z101		5PSFE55MB-	FILTER CERA	SFE 5.5MB
Z102		5PTPS55MB-	FILTER CERA	TPS-5.5MB
Z103		5PF1034B--	FILTER SAW	F1034B
Z104		5PCDA55ME2	CERA DISCRIMINATOR	CDA5.5ME20

IF MODULE CIRCUIT ELEMENT TABLE

	PAL B/G (FTZ)	PAL B/G (AUS)	PAL I (UK)	PAL I (S.A)	PAL D/K (CHN)	PAL (GN)	PAL K/G
	B587JPN	B366AST	I393UKI-	I369SAF	D380CHN	B389GN-	D380ORT
S/N	97PA136700	97FA139800	97PA139100	97PA139900	97PA13900	97PP141800	97PA145700
R101	220	100	100	100	100	220	100
R107	1.3K	1.8K	1.5K	1.2K	1.8K	1.3K	1.8K
R116	620	620	470	470	470	600	470
C118	20P	20P	20P	20P	20P	20P	20P
L101	TRF-1336	X	X	X	X	X	X
L102	TRF-3810	TRF-1448Q	TRF-9102S	TRF-9201	TRF-1448Q	TRF-3810	TRF-1448Q
L103	TRF-3813	TRF-3615	TRF-3813	TRF-3812	TRF-3615	TRF-3813	TRF-3615
L106	TRF-3882	TRF-3691	TRF-3882	TRF-3882	TRF-3691	TRF-3882	TRF-3691
L110	TRF-3824	TRF-3824Z	TRF-3824	TRF-3824	TRF-3824Z	TRF-3824	TRF-2824B
Z101	SFE5.5MB	SFE5.5MB	SFE6.0MB	SPE6.0MB	SFE6.5MB	SFE6.5MB	SFE6.0MB
Z102	TPS5.5MB	TPS3.5MB	TPS6.0MB	TPS6.0MB	TPS6.5MB	TPS5.5MB	TPS5.5MB
Z103	F1033	F1033	F1033	F1027C	F1026V	F1034B	F1026V
Z104	CDA5.5ME20	CDA5.5ME20	CDA6.0ME20	CDA6.0ME20	CDA6.5ME20	CDA5.5ME20	CDA6.0ME20

TUNER

	S/N	
VTSA1SZ3	4859705930	GERMANY
VTSA1AZV	4859704130	U.K. HONGKONG
VTSA101Z	4859707030	S/A
VTSA1BZ	4859705830	OSTRAILIA
VTSA1CZ	4559706830	

RF MODULATOR

	S/N	
MCB9-UG3601	97P7204200	B/G
MCB9-UB3601	97P7204300	I
MCB9-VG3403	97P7204600	B. SINGAPOLE
MCB9-UO3601	97P7205000	D/K E/EUROPE
MCB9-VC4503		
MCB9-VA0103		

• Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. **Insulation resistance test**
   Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table below.

2. **Dielectric strength test**
   Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) See table below.

3. **Clearance distance**
   When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table below.

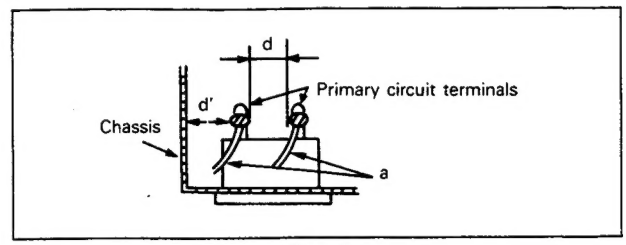


Fig. 8

Table 1: Rating for selected areas

AC Line Voltage	Region	Insulation Resistance	Dielectric Strength	Clearance Distance (d), (d')
100V	Japan	≥ 1 MΩ/500 V DC	1 kV 1 minute	≥ 3 mm
110 to 130 V	USA & Canada	———	900 V 1 minute	≥ 3.2 mm
* 110 to 130 V 200 to 240 V	Europe Australia	≥ 10 MΩ/500 V DC	4 kV 1 minute	≥ 6 mm (d) ≥ 8mm (d') (a: Power cord)

* Class II model only.
Note: This table is unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

4. **Leakage current test**
   Confirm specified or lower leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

   Measuring Method: (Power ON)
   Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure and following table.

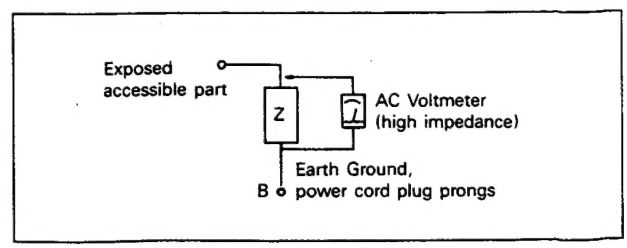


Fig. 9

Table 2: Leakage current ratings for selected areas

AC Line Voltage	Region	Load Z	Leakage Current (i)	Earth Ground (B) to:
100V	Japan	1kΩ	i ≤ 1m A rms	Exposed accessible parts
110 to 130 V	USA & Canada	0.15μF, 1.5kΩ	i ≤ 0.5 m A rms	Exposed accessible parts
110 to 130 V 200 to 240 V	Europe Australia	2kΩ	i ≤ 0.7 m A peak i ≤ 2 m A dc	Antenna earth terminals
		50kΩ	i ≤ 0.7 m A peak i ≤ 2 m A dc	Other terminals

Note: This table unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.